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THE
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THE AMERICAN PRACTITIONER

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.

STUDIES OF SOME OF THE REFLEXES, THE NODULAR, THE PECTORAL, AND VASO-MOTOR.*

BY WILLIAM CARSON, M. D.

One of the Physicians of the Cincinnati Hospital and Lecturer on Clinical Medicine.

At the present time considerable attention is being given to the study of reflex action, as shown at different parts of the body and limbs. These reflexes, or at least a number of them, are considered to represent actual values in the diagnosis and prognosis of some nervous diseases. Our purpose now is to revive some old studies of what might now be called a cutaneous reflex, specially manifested in chronic diseases of the lungs, and to make mention of two other forms of reflexes, one of which is not new in practice, but may be reviewed with some interest in the present aspect of such studies.

In 1872, in a paper read before the Cincinnati Academy of Medicine, we referred to some peculiar results of percussion over diseased lungs in cases of phthisis. It is that of nodular elevation, after a quick, sharp stroke of finger or hammer, about the size of a large shot, which travels from the point of percussion to varying distances in a direction corresponding in a general

*Read before the Cincinnati Medical Society.

way with the fibers of the pectoral muscle, and then disappears. It may be produced most readily over the second or third rib, and will follow sometimes closely the rib. It is not easily developed over the body of the muscle. Sometimes a long, quick vertical stroke from the clavicle at its inner third to the body of the muscle below will develop a continuous elevation along the line of rubbing, which will for a moment remain stationary and then disappear, leaving behind occasionally the "red-line" reaction. It is a very common thing in phthisis, and we believe it to have a corroborative strength in the general group of physical signs belonging to the case. It is generally more marked over the lung most affected. We find it in some individuals who present a minimum of physical signs, and it may then supplement a hesitating judgment. I would also take it as an indication not only of increased irritability of contractile elements beneath, but of failure of nutrition. Lawson Tait, however, found no change in an examination of some pectoral muscular fibers. A comparatively thin subject is necessary for its development. Viewed as an evidence of increased local irritability, greatest on side of most disease, it is an interesting exhibit of the effect of chronic pulmonary changes on the adjacent segments of the spinal cord or the so-called trophic system of nerves.*

There might be some question as to whether this is a true reflex or simply a local manifestation, but its physiological aspects seem to lie in the region of muscular irritability. Auerbach, according to Tait, measured "the rate of traveling of the divisions of the primary nodule," and found it to be about eighteen inches per second. The reference here is to the fact that sometimes you have a secondary wave and nodule following the primary.

According to Graves, who first described it, Stokes, and Tait, the clinical significance is important because of its association with consumptive diseases. The latter states that it may afford a means of distinguishing between acute phthisis and typhoid fever.

*Dublin Quarterly Med. Journal, Vol. 52, 1871, p. 319.

Along with this "myoidema," as Tait named the nodular percussion sign, there is, as we think, closely associated the "pectoral reflex." Gowers* does not, in his enumeration of the "reflexes," mention this one. Ross does mention it, and attaches some importance to it. It is a thing we have often called the attention of students to, and spoken of it as bearing about the same relation to phthisis and wasting diseases as the nodular reflex. It is produced by a stroke of the finger or hammer on the sternal attachments of the pectoral muscles, when will be observed a quick contraction of some of the fibers, varying in mass and number so that there is a movement of the anterior axillary margin in varying degrees. In a man with pyloric cancer, who is much wasted, there is a jerk of the whole shoulder. Usually when the "myoidema" exists the pectoral reflex also is easily produced. It will appear in a variety of conditions. Phthisis, cancer of pylorus, acute alcoholism or debauch, cervical paraplegia, chronic bronchitis with emphysema are some of the diseases in which we have found it in excess. Its physiological interpretation is the same as that of other skin or muscle reflexes.

Tait has called the nodular elevations and waves "idio-muscular," or produced in the muscular fibers without the intervention of any reflex arc; and if that be so, they are not properly classified among the reflexes; yet they may serve as practical a purpose in localizing a chronic disease of the lung. The "pectoral movement" can properly be classified as a reflex, because the afferent impression is made on either the tendinous attachment of the fibers or some of the adjoining fibers, and a movement follows, not by continuous motion, but by reflected paths. Take the two phenomena together, the nodular and the pectoral, and they would seem to add mutual strength, particularly as they are often combined in phthisis. In these cases they not only point to local disease, but they are indices of the general tendency to failures in nutrition.

Of vaso-motor disturbances or reflexes (if that term be the

* Diseases of Spinal Cord, 2d edition, 1881.

proper one), the one most utilized for diagnostic and prognostic purposes is that upon which Trousseau laid so much stress in what he describes as "cerebral fever." He was the first to call attention to it, and, as he says, more than twenty years before his description of it in his lecture on "cerebral fever." It seems proper, now that active study of all reflexes is being pushed in practical medicine, that this should be classified among the vaso-motor reflexes. His description is as follows of "cerebral or meningeal macula": "If, after exposing the patient, his skin be gently rubbed with a hard body, such as a pencil, or simply with the nail, the part touched rapidly becomes of a bright red color, which persists for a more or less prolonged period—eight, ten, or fifteen minutes." Again, when speaking of a child's case, he says: "When I very gently made on her abdomen, with my nail, cross markings, longitudinally and transversely, in less than half a minute the portion of skin which I had touched was suffused with a very bright red tint, which was diffused at first, but grew by degrees fainter, leaving along the track where the nail had passed lines of a deeper red color, which persisted for a pretty long time. This is what I mean by cerebral macula." He thought this symptom of great importance, yet he says "it is not of absolute value when the differential diagnosis of cerebral fever has to be made."

Some of his contemporaries disputed its great significance, and yet it has been accepted as a very important indication of tubercular and other forms of cerebral meningitis, if we may judge by references to it in descriptive medicine, and also by our own observations of reliance upon it by practitioners generally. Trousseau acknowledged he had produced it in typhoid fever and exophthalmic goitre. Of a particular case of the latter he says: "If the epidermis be slightly irritated, after two seconds at most, a beautiful red stain is seen, which lasts nearly a minute." Further: "Now my opinion is that these three phenomena, acceleration of the pulse, rise in temperature, and cerebral macula, are of the same kind, and are traceable to the same

cause, namely, some deep modification affecting the sympathetic and vaso-motor nerves in particular," etc.

Like most physicians, we have been accustomed to attach a good deal of importance to the "red line." Without any desire to divest it of all proper significance, we yet think it needs qualifications, as the following statement of some experiments in the wards of the Cincinnati Hospital will show. Out of thirty cases taken indiscriminately, twenty-eight exhibited the red line more or less rapidly and distinctly. The diseases were: Typhoid fever, nine cases, and one where a question between acute tuberculosis and typhoid fever arose—in this case it was present; phthisis, five; pneumonia, two; basilar meningitis, one; acute alcoholism, three; cancer of pylorus, perihepatitis, syphiloma of brain with right hemiparesis and ocular paralysis and iritis, cervical paraplegia, chronic bronchitis with emphysema, cerebrospinal meningitis, brain tumor, probably cerebellar, and heart disease were the other cases. Of these, the most distinct reactions or reflexes were obtained first from the case with the symptoms of basilar meningitis. If we were to accept Trousseau's dictum, it would be decisive of the diagnosis; yet there are some points of doubt, maintained in part by the fact that the case is without fever. There are, however, suspicious ophthalmoscopic appearances, such as an unusual number of vessels coursing in every direction, and a want of definition of one side of the disc in one eye. The apparent increase of vascularity Dr. Ayres thinks may be due to the want of pigmentary matter in the choroid by which the vessels are brought into view, that otherwise would not be seen.

It is desirable that in just such a case we should have all the reinforcement which we can get. I think the rapid production and long continuance of the reflex in this case does add confirmatory if not conclusive weight. In some cases we timed the beginning, the height, and duration of the red color. In the basilar-meningitis young man the red line began to appear in eight seconds, reached its maximum in about twenty seconds, and began to fade in one minute ten seconds. Its greatest width

was half an inch. The other case of suspense of opinion between acute tuberculosis and typhoid fever, in which there has been delirium, showed the beginning of the reflex in about five seconds over left pectoral muscle (the left lung showing predominance of physical signs), and in about fifteen seconds over right pectoral. The line was well marked, but not so broad or persistent as in the above case. Next to these cases the typhoid fever ones showed a quicker and more developed reaction; yet between typhoid fever and meningitis we must not unfrequently hesitate. That is a question we have had before our society quite recently. The presence or absence of indican may help us, but it remains to be seen whether the red line will. Now it is at least doubtful.

One of our alcohol cases was a very well-developed man, and yet on both sides the lines were well marked over the pectorals. (In the man with cervical paraplegia, aged sixty-one, who is remarkably anemic, no red lines are producible.)

A man with pyloric cancer and great emaciation and pallor showed no reaction. In case of bronchitis and emphysema, where there has been only moderate loss of flesh, the line was very narrow, began in fifteen and attained its maximum in thirty seconds.

In general, the cases with the most pronounced brain symptoms showed most distinctly the vaso-motor reflex. We can find some explanation of this, so far as basilar meningitis is concerned, in the fact of the close proximity of the general vaso-motor center in the medulla to the basic lesion; and so far as meningitis of the convexity and other parts of the brain is concerned, in the connection of the medullary center "with certain definite regions in the cortex of the brain. These vaso-motor centers are (as to dogs Eulenburg and Landis) situated in the vicinity of the voluntary motor centers of the cortex."*

In typhoid fever arterial tonus is lowered by the special influences at work, and then secondary effects, such as passive congestion of the brain, thereby introducing a similar susceptibility

*Ross on Diseases Nervous System, Vol. 1, p. 184.

to the vaso-motor reflexes of primary brain lesion. It is scarcely necessary to refer to the experimental evidence of the effect of artificially-produced lesions about the medulla on vascular innervation, etc.

We bring these subjects before the society in connection with a case of locomotor-ataxia, a disease which has stimulated much of the study of the reflexes in diseases of the nervous system. It will be seen that the special aspect of the subject of our paper is in connection with diseases of the lungs.

CINCINNATI, O.

PRIMARY CANCER OF THE LUNG.

BY G. W. H. KEMPER, M.D.

In the July number of this journal, for 1882, page 13, may be found a paper on the above-named subject, which I read before the Indiana State Medical Society, May 10, 1882.

In that paper I mentioned the fact of the meagerness as well as the unsatisfactory descriptions of this disease in our text-books. Since the date mentioned I have received the New Sydenham Society's "Stokes on Diseases of the Chest," edited by the late Dr. Hudson.

As this work is accessible to comparatively few of the readers of this journal, I have thought it proper to call attention to some points made by this master of our art upon the subject of cancer of the lung, relating more especially to the diagnosis. Thirty-seven pages are devoted to a consideration of the disease, and the whole article is replete with good sense.

On page 385, he says: "Cancerous disease of the lung is met with in two forms; in the first, a degeneration of the lung occurs and the organ is transformed into a cancerous mass, without the production of any tumor; in the second, the scirrhus or encephaloid matter forms a tumor, at first external to, and

ultimately displacing the lung. In neither case can we apply any direct diagnosis; and I do not know how the first could be determined with certainty. The symptoms are always obscure, and the physical signs being merely those of solidity, more or less extensive, the greatest difficulty exists in making an accurate diagnosis. Repeated observations indeed might lead us to doubt whether the lesion was any ordinary disease, and the existence of external cancer would give a probability that the internal affection was of the same nature. But in a case seen for the first time, and in which no such external disease existed, we have no means by which its nature could be positively determined."

On page 396, at the beginning of Part II, he refers to the above language, and at this later date writes as follows: "Since that period, however, I have been enabled to arrive at a direct diagnosis of the first form of cancer. I have also been fortunate enough to meet with a remarkable case of ulcerated cancer of the lung, and have extended my observations upon cancerous tumors within the thorax. So that we can now affirm without presumption that, in many cases of this disease, whether it affects the lung simply or occurs as a mediastinal tumor, a direct diagnosis can be arrived at. By direct diagnosis, I mean the discovery of the internal disease in such cases where there is no recognized cancer in other situations, such as the mamma, uterus, extremities, etc." In other words, primary cancer.

I may give his own summary of the diagnostic marks: "That in simple cancerous degeneration of the lung the principal physical signs are the gradual diminution of the vesicular murmur without râle, its ultimate extinction, and the signs of perfect solidification. That the evidences of perfect solidification are better found in this disease than in any other pulmonary affection." "Also pain of a continued kind; a varicose state of the veins in the neck, thorax, and abdomen; edema of one extremity; rapid formation of external tumors of a cancerous character; expectoration similar in appearance to currant jelly;

resistance of symptoms to ordinary treatment. That, though none of the physical signs of this disease are (separately considered) peculiar to it, yet *that their combinations and modes of succession* are not seen in any other affection of the lung."

In my former paper I stated that, contrary to a rule laid down, that in cancer the percussion dullness does not begin at the bottom of the chest—the reverse may be true—and that no fixed rule prevails. Stokes has observed the disease spread from below upward.

In my own case, in the article referred to, a cervical gland just above the right clavicle enlarged to the size of a hen's egg. Stokes mentions a similar complication and cites further references to cases observed by Graves. These external tumors were not confined to the cervical region alone, but appeared upon the forehead, ramus of the lower jaw, and on the lumbar spinous processes. "They were unaccompanied by pain, soreness, or any inflammatory phenomenon."

I stated that dyspnea was a common symptom, and was especially valuable in a diagnostic point when associated with edema of the chest and upper extremities. A study of the cases narrated by Stokes increases my faith in the value of this pair of symptoms. Given a case of obscure lung-disease with edema of the corresponding arm, enlarged superficial veins of the neck, chest, or abdomen, and accompanied with dyspnea, and we could scarcely hesitate to declare upon these symptoms alone that the lung was cancerous.

In Stokes's cases, as usual, no characteristic expectoration is recorded. In one case he observed "the peculiar currant-jelly-like expectoration." This is a stereotyped expression used by authors in describing the sputa supposed to be characteristic of cancer of the lung. A somewhat careful study of the details of numerous recorded cases leads me to suspect that the phrase is found far more frequently in didactic descriptions than the sputa is found in clinical cases.

Finally, I may mention that he considers the transmission of

the impulses of the heart over the diseased side a symptom of some value; also the fact of a patient being attacked with severe symptoms of pulmonary disease which resists ordinary treatment.

MUNCIE, IND.

A FEW WORDS ON PERINEORRAPHY AND PERINEOPLASTY.

BY THEOPHILUS PARVIN, M.D.

Though perineorrhaphy and perineoplasty are commonly used as synonyms, their etymology shows an important difference in meaning. Perineorrhaphy really means the immediate or primary operation for a perineal rupture; the operation consists of simply introducing sutures which shall hold together freshly lacerated surfaces; but perineoplasty is strictly applicable only to the remote or secondary operation, in which the surfaces to be united must first be denuded, freshened in order that they may grow together when properly kept in contact by the subsequently introduced sutures. The words happily express this important difference which, when they are used synonymously, can only be expressed by a circumlocution. This etymologic difference in signification will be observed in the present paper.

It is not my purpose to consider the causes of tears of the female perineum nor the many methods of treating such lesions, but rather to urge upon those who practice obstetrics the importance of making a careful visual examination of the parts immediately after labor, and if a tear, no matter though it be slight, be found, of at once performing perineorrhaphy.

The frequency with which tearing of the perineum occurs in labor is an unsettled question, partly, as suggested by Spiegelberg, *Lehrbuch der Geburtshülfe*, because of individual differences as to what should be thus called, but chiefly because the great

majority of practitioners never find out immediately after labor, in the only way possible, by the eye, whether the perineum is whole. Spiegleberg states that, by his own statistics, tears of two and a half centimeters from the frenulum occurred one hundred and two times in three thousand births; but a tear of less than two and a half centimeters may be followed, if not treated properly at the right time, by immediate or remote injurious results. In the statistics given for another purpose by Dr. Sinclair, Transactions of the American Gynecological Society, Volumes V and VI, it appears that the perineum was torn once in between five and six cases; true, many of these tears were slight, but still there was quite a number in which the injury was great. Mintert (*Annales de Gynécologie*, November, 1882) says that perineal rupture occurs in general in fifteen per cent, in twenty-five per cent of primiparæ, and in fifty-three per cent of primiparæ more than thirty years of age. By the way, this author also states that the suture is the only good means of treatment, even where the rent is slight. The probability is that perineal tearing is much more frequent than generally believed by the profession.

It is said that Trotula first, though vaguely, suggested the operation for ruptured perineum; but it was first clearly set forth by Paré, and then first performed by his pupil, Guillemeau. Sprengel, in his History of Medicine, credits it to Mursinna, 1797.

Differences of opinion have obtained in the profession as to when the operation for ruptured perineum should be done: Velpeau, for example, urged waiting until the woman's health was restored; others advised operating from the fifth to the tenth day after labor, and still others operating immediately after the injury. The last rule is now, by common consent of the best authorities, the one which should be observed. It has been proved that the great majority of those thus operated on are cured, while but a small minority of those left to nature are; and at the same time those thus left without professional intervention are more liable to septicemia. Usually the restoration of

a torn perineum, when stitches are not used, is only partial and by cicatricial tissue, often presenting an irregular or a very sensitive surface.

During the last nine months I have performed perineorrhaphy five times, and in each case the result was quite satisfactory. In one of these cases the rent was a little more than a centimeter in length, and only a single stitch was used; in three the rent extended to half the perineum. The fifth case was one of especial interest, from the fact that not only was the perineum torn to the anal sphincter, but there was also a rent at the left side of the vulvo-vaginal ring separating the nympha almost completely. My visit to this patient, a primipara, was just after she was delivered, without instruments, of a very large child, and I had come with forceps to deliver the child, not with silver wire to care for a torn perineum; however, being requested by the gentleman in charge of the case to operate, I took the only material for sutures immediately available, hair from a horse's tail, and used five stitches for the perineal tear, then three for that of the nympha. After the stitches were tied I separated the patient's knees some eighteen inches, and there was not the least tension upon any of the stitches; of course then the customary bandage about the knees was not used. I am confident such bandage, a very great discomfort to the patient, is utterly unnecessary after perineorrhaphy, and it is probable it may be dispensed with also after perineoplasty. Probably horsehair is as good as any material for sutures in perineorrhaphy, but the stitches ought to be a little nearer together, and therefore one or two more will be needed than those of silver wire.

My experience is adverse to the use of catgut, for the pressure of the knots causes ulcerations, slight it is true, but still giving the patient some discomfort.

Hildebrandt, Billroth's *Handbuch der Frauenkrankheiten*, was, I believe, the first to suggest, 1877, the non-use of the catheter after an operation for the restoration of the perineum; he states that catheterization is unnecessary, and is liable to cause vesical catarrh. While, after perineoplasty, the catheter as a rule need

not be used, it probably will be found necessary in most cases for the first few days after perineorrhaphy.

Most operators agree that after either operation no effort should be made to have the bowels confined, but rather have them moved daily by an enema, and probably the best for this purpose is one of flaxseed tea; in cases of perineorrhaphy action of the bowels had better be delayed till the second or third day.

When *partial* healing, which is the rule in perineal tears left to nature, occurs, it is not unusual to find a raw, sensitive surface at the anterior margin of the restored portion, a surface which becomes painful when the patient walks much, and is intolerant of coition. So too such a condition sometimes is not uncommon after a slight tear, one which, according to most obstetric authorities, the practitioner is quite justified in leaving to the healing of nature. Dr. Reamy, Transactions of the American Gynecological Society, Volume II, has, with his well-known ability and by a startling array of statistics, presented the importance of the slighter varieties of perineal lacerations, giving as one of the mischievous results of these injuries the condition just mentioned. My own experience is that it is the most serious result. During the present year I have performed perineoplasty in four cases of this minor laceration of the perineum; in all but one of these patients the injury happened some years before. How much better if all such patients were operated on immediately after the tear occurred!

After a perineoplasty where but a small part of the perineum was involved in the injury, it surely is unnecessary to bandage the knees together; it probably is unnecessary in any case—but I have not had a case of complete rupture to treat since giving up the appliance after perineorrhaphy, and therefore can not make the statement positive; it is better for the patient to lie on one and then on the other side, occasionally lying upon her back when weary of a side position, but only thus when awake.

Perineoplasty will become very much less frequent if perineorrhaphy is the rule of the obstetrician.

Reviews.

Manual of Obstetrics. By A. F. A. KING, M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D. C., and the University of Vermont, etc. Philadelphia: Henry C. Lea's Son & Co. 1882.

The author in his preface states that "the chief purpose of this book is to present, in an easily intelligible form, such an outline of the rudiments and essentials of obstetric science as may constitute a good ground-work for the student at the beginning of his obstetric studies." He further states that he has "most largely depended upon the recent treatises of Leishman, Playfair, and Lusk in dealing with matters that are still unsettled." He also suggests the volume may be of service to practitioners whose onerous duties allow but little leisure for consulting larger works.

This volume is a duodecimo of 325 pages, including the index, and has fifty-eight illustrations.

Dr. King attempted a difficult task, viz., putting the essentials of obstetric art and science in such brief space, and we believe he has succeeded remarkably well; he has made a book which will prove useful alike to the student and to the practitioner. Nevertheless there are, both in the scientific and in the practical teaching, some things from which we must dissent.

On page 29 we find the following: "Complete ossification of the pelvic bones does not take place till about twenty years of age, which affords a probable explanation why labor is generally more easy during the early part of adult life than later. The bones yield a little, and after labor is over the pelvis probably retains to some extent the size and shape acquired by the first

easy delivery, so as to render subsequent labors more easy." Now, if we understand this, the obvious moral is, women should enter on maternity before they are twenty years of age, if they would have easy labors. But apart from all social considerations, bearing children ought to be postponed until twenty years, for only then, as a rule, has the pelvis attained its perfect development.

On page 38 the figure of 8 arrangement of the vaginal and anal sphincters is taught. If we are to believe Savage (Anatomy of the Female Pelvic Organs), no such crossing of muscular fibers is found here.

Dr. King states that the *carunculae myrtiformes* are "vascular membranous prominences placed immediately behind the hymen, and quite independent of it." On the other hand, in the work of Tarnier and Chantreuil, now in publication, it is said the *debris* of the hymen when cicatrized form the *carunculae myrtiformes*: this too is the common teaching as to the origin of these bodies.

The functions of the oviducts are, according to our author, to convey spermatic fluid from the uterus to the ovary, and the germ cell from the ovary to the uterus; it is said that when the ovule is discharged from the ovary the *fimbriae* of the tube, acting as *prehensile* lips, grasp the germ and force it into the trumpet-shaped mouth, etc. There is no proof that the spermatic fluid passes to the ovary; and so far as even the spermatozooids ordinarily going that far, the matter is doubtful, for it is almost certain that impregnation generally occurs in the external part of the oviduct. The way in which the ovule enters the oviduct is, to say the least, very improbable, for to grasp an object only one hundred and twentieth of an inch in diameter by these fimbriae so widely expanded as to embrace a large part of the ovarian surface, would be like building an elephant-trap to catch a mosquito: there are better explanations of the way in which the ovule enters the oviduct. The description of the structure of the ovary is not good. If the author would read Sappey's description, to which reference was made in our notice

of Dr. Lusk's work, we are sure he would renounce the *tunica albuginæ*, and the *stroma* with its "dotted cavities" containing Graafian vesicles.

The number of milk ducts is said to be fifteen to twenty, but according to Sappey there are only ten to twelve.

On page 61 spermatozoids are said to be ciliated epithelial cells; they enter the ovule, the union taking place in the womb, oviduct or in the ovary, probably most often in the ovary. Now here, it seems to us, are some mistakes which ought to be corrected. The spermatozoid is not a cell; only one spermatozoid enters the ovule, and indeed only its head; the tail, which was its locomotive power, is left outside, just as the traveler leaves his horse outside when he enters a house; if by rare chance a second spermatozoid sticks its head in, the result is a monstrosity. It has been proved that in the rabbit fecundation takes place in the oviduct, and it is probable, according to Duval (thirty-third volume of the *Nouveau Dictionnaire de Medecine de Chirurgie Pratiques*. Paris, 1882), that the spermatozoids are retained in the *morsus diaboli* or folds of the pavilion, awaiting the passage of the ovule; impregnation in the uterus is generally rejected because of degenerative changes which have occurred in the non-impregnated ovule before it arrives there. We might find fault with the author's "suctional aspirations" by the uterus to which, in part, he attributes the entrance of the spermatic fluid into this organ, but we pass on to refer to the statement that "it should be remembered the germinal vesicle and germinal spot disappear before the cell leaves the ovary, so that we have nothing to deal with in this description but the simple vitelline membrane with its contained granular nucleus." Recent investigations show that the germinal vesicle does not disappear, that after the formation of the polar globules to which it contributes there still remains a nucleus, that which is known as the *female pronucleus*, and when these changes have occurred the egg is mature and ready to leave the ovary.

In describing embryonic development the author makes the primitive trace the same as the dorsal furrow; the former ap-

pears before the latter, but they are independent and occupy different parts of the *area germanitiva*. Dr. King says: "Some women date impregnation, and often correctly, from unusual gratification during a particular act of coition." As insemination and impregnation are probably separated by several hours, or by some days, we believe this statement, which has derived its vitality almost altogether from Cazeaux's indorsement, ought to be consigned to the popular fallacies rather than kept among professional beliefs.

Among the many remedies recommended by the author for the nausea and vomiting of pregnancy, one of the best, tincture of *nux vomica*, is not mentioned.

Is not Dr. King mistaken in alleging habit as a cause of abortion? Habit did not begin the series, and why should it be called the cause of the middle and last of that series when it had nothing to do with the first?

To attribute abortions to habit gives no satisfactory explanation. We can not believe that a brisk purgative or an emetic is in any case proper treatment of incomplete abortion.

The author says that "it is well always to give a teaspoonful of fld. ext. of ergot immediately after the child is born, or a few (fifteen) minutes before, when we are certain the child will be born so soon, to insure contraction of the womb and expulsion of the placenta." It is probably better not to give ergot until after the delivery of the placenta, certainly not until after that of the child. In describing the mechanism of labor, vertex presentation, the delivery of the shoulders is said to occur with the posterior first; but if the perineum be perfect, the anterior or pubic shoulder is delivered first. The author agrees with Matthews Duncan and Albert H. Smith in rejecting lateral or pendulum movements of the obstetric forceps; but this is still an unsettled question; nevertheless we greatly doubt whether such movements will be or ought to be abandoned.

A cut of Tarnier's forceps is given, but unfortunately it is not that of the last form given this admirable instrument.

We are glad to see that Dr. King prefers ether to chloroform

as an anesthetic in labor, and that he believes an anesthetic should be given in the second stage if the suffering be great; we would not, however, limit it to the second stage, for in some cases it is needed and is peculiarly useful in the first stage.

The last chapter is entitled, *The Jurisprudence of Midwifery*. It is an excellent one, full of valuable information. There is, however, one statement in which Dr. King will not be sustained by some of the most eminent and able of living obstetricians; it is this: "It is undoubtedly possible for pregnancy to be prolonged four, five, six, seven, and even eight weeks beyond the natural period, and the child be born alive."

We end our hurried and imperfect review with sincere wishes for the success of this condensed and practical volume.

The Psychology of the Salem Witchcraft Excitement of 1692, and its Practical Application to our Time. By GEO. M. BEARD, A.M., M.D., Member of the New York Neurological Society, of the American Neurological Association, etc.; Author of "Neurasthenia," "American Nervousness," etc. New York: G. P. Putnam's Sons. 1882. 12mo. Pp. 112.

If any one wants to see a mental picture of the times of the Salem witches framed in a screed from Dr. Beard against the court, the jury, the witnesses, and the attorneys who were instruments in helping Guiteau to the gallows, he should purchase and peruse this little volume and be gratified. Indeed one gathers the idea from reading the book that its author selected the theme of the treatment of the Salem witches, with its incrustation of odium which has been integrating for two hundred years, that he might have in this repulsive picture something worthy as a paradigm to illustrate the ignominy of a judicial organization which brought Guiteau to a felon's death, and of the press and the people who approved of, or were in sympathy with, the result.

A quotation will at once indicate the spirit and portray the style of the author, e. g. from page vii of preface: "There are times in the evolution of delusions, and in the history of nations in which delusions are organized, when non-expertness on any special line, long restrained through circumstances or negligence, becomes a volcano; the low mutterings and reverberations that are at once so frequent and so slight, but so harmless as to cause no alarm, suddenly cease, and from the long quiet crater an eruption appears, darkening the sky and burying the earth in its fiery streams. Such was the witchcraft excitement in Salem in 1692; such was the Guiteau excitement in Washington in 1882; the one marking the death of the dogma that the innocent should be condemned to death for the fancied crime of witchcraft on specter-evidence; and the other marking the death of the dogma that ability to know right from wrong is proof of responsibility, and that the insane who commit murder should be hanged."

The psychological wickedness of this dogma, that ability to know right from wrong is proof of responsibility, makes the darkest possible stains on the judicial ermine, under which it originated and where it still finds its secure rest. This seems to be the sentiment of Dr. Beard, and one is led to infer from the oft-repeated declaration that he was ready at all times, both during the trial and after, while the case was before the court in banc and within the pardoning power of the President, to point out just what each of these repositories of power should do in the premises, and was not called on nor permitted to give controlling testimony of Guiteau's insanity, that all parties concerned are disgraced for all future time. The dominant idea of the author in this connection one finds to be that, if Guiteau were shown to be aberrant in one faculty of his mind, for example, in his religious views, he might deliberately plan the murder of the President, preparing in advance for his own safety, execute the plan and demonstrate the completeness of his arrangements for the purpose intended, and only failing in the end of his expectation of pardon, he should be held to be guiltless of any crime against

society for which he should suffer. Surely such an idea is not founded in the highest evolution of the human mind, and apparently ignores or misjudges the present purposes of human life. Undoubtedly the insane have rights, but the sane also have rights, and the tendency of such self-sufficient and domineering specialists as our author is to so order affairs that the former shall be paramount and the latter secondary. And, furthermore, there must be something short in the upper plane of the mental endowment of him who recognizes no difference in the psychological state of those who tried, condemned, and executed the Salem witches in 1692, and those who tried, condemned, and executed Guiteau in 1882.

It must not be surmised from the foregoing remarks that Dr. Beard's book is all Guiteau and no witches, for there is in fact much about the witches, and the reader will find a good deal of it edifying.

J. F. H.

Rheumatism, Gout, and Some Allied Disorders. By MORRIS LONGSTRETH, M.D., one of the attending Physicians of the Pennsylvania Hospital, Lecturer on Pathological Anatomy at the Jefferson Medical College, Philadelphia, Penn. New York: William Wood & Co. 1882. Pp. 280.

This, the October issue of Wood's Library of Standard Medical Authors, is a fresh book on a very interesting pathological condition, by an intelligent gentleman who has given a quite full narrative history of the various theories which distinguished physicians have held concerning rheumatism since the recorded dawn of medicine, and continuing the story to include even the speculations of the most recent coining. In presenting the causes of rheumatism he acknowledges the inadequacy of any thing yet promulgated, and while he names many, apparently does not pin his faith to any, and in the chapter on pathology he alleges that the greatest number believe in the lactic-acid idea, but fairly enough recounts the objections to it, but does

not refer to the argument of MacLagan, who certainly gives most conclusive reasons why the famous doctrine of Prout, reinforced by Todd, must be abandoned. In referring to the germ theory, which he does under the head of "Infection Theory," credit is given to Muller and Hirsch for the suggestion of it, and no mention is made in this connection of MacLagan, although it is quite certain that the author is familiar with MacLagan's late work as, when he comes to treatment, he quotes and credits fully MacLagan in regard to the management of rheumatism with the salicyl compounds. Perhaps the reason why our author dwells so fully on MacLagan's therapeutics and says so little about his views on the pathology of rheumatism is because the medical world have with great unanimity fallen on MacLagan's salicyl treatment of the disorder, not troubling themselves at all as to whether the malarial bacteria have any agency in causing the disease.

On page 7 the author gives an eight-line definition of rheumatism which might lead one to suppose that he regarded what goes under this title as a homological pathological aberration, but a further reading of his text convinces that it would be an erroneous supposition, for in the subsequent pages he fully recognizes the multiple and diverse character of what is called rheumatism, though it is doubtful whether he insists with sufficient earnestness on the wide destruction in the cause, nature, and termination of some of the members of the great family of disorders known as rheumatism. The high distinction of scientifically separating and marking for future management the various disorders now called rheumatism is still open to the successful energy of some wise pathologist.

The student will find Dr. Longstreth's book a very complete treatise on the subject of rheumatism, briefly covering the changing views of the profession from the beginning to the present, and fairly presenting the prevailing ideas of its causes, its pathology, and its treatment, giving point and emphasis to such views concerning it as seem to have the strongest claim to consideration with the best intelligence of the present generation of doc-

tors, but candidly acknowledging that there is much to learn before we can claim that our knowledge in this behalf is perfect.

The practitioner who may desire to refer to the volume for some specific purpose may possibly have reason to complain of something of diffuseness in style and something of imperfection in arrangement that makes it a little more tedious to reach his point than is most agreeable.

Dr. Longstreth's presentation of gout is confined to the final chapter of his book, containing twenty-seven pages, but, nevertheless, the aristocratic disorder is marshaled in good order and handled with sufficient detail to give the reader an intelligent understanding of its essential features.

J. F. H.

A Practical Laboratory Course of Medical Chemistry. By JOHN C. DRAPER, M.D., L.L.D., Professor of Chemistry in the Medical Department, University of New York, and of Physiology and Natural History in the College of the City of New York. New York: William Wood & Co. 1882. Pp. 71.

This is a neat little volume in note-book form, with each alternate page left blank for the student to use in recording his experiments as he makes them. A larger type points out to the student the exact experiments he ought to make, and these exercises are so arranged that if intelligently and strictly followed the inquirer, when the course is completed, will have excellent knowledge of so much medical chemistry as is demanded in the general practice of medicine. The introduction defines terms and lays down some general principles. Section I treats of poisons, inorganic and organic, what they are, and how to find them for diagnostic and therapeutic purposes, very properly advising that when toxicological investigations are to be made for judicial purposes and defended in courts the service should be left to experts. Section II points out how to find impurities in water, what they are, and how to correct them—a bit

of information sadly needed by many a practitioner, that something approximating exact knowledge may take the place of the loose fancies so often uttered by M.D.s in favor or in condemnation of water about which interested parties make anxious inquiries. Section III is devoted to the animal fluids, running through the whole catalogue. The author's presentation of urine will be found exceptionally clear and satisfactory, giving first the normal constituents and their variations within the limits of health, and then the ingredients due to pathological changes with the simplest reliable means of detecting and measuring them. This part of Section III will be prized by many a practitioner who has heretofore given little attention to the examination of urine, but under the pressure of a demand for greater exactness in diagnosis, and of the requirements of some insurance companies of their medical examiners, feel the need of some plain and reliable instruction in the premises. Section IV, and last, is given to the consideration of sediments and calculi, covering the whole range of these solid products of vital activity, whether physiological or pathological. After the sections come an "Alphabetical List of Symbols and Formulæ," "Arrangement of Laboratory," and an index.

For a small book this one contains a large amount of information of value to students and a certain class of practitioners, and to these it is heartily commended.

J. F. H.

Clinic of the Month.

CLINICAL OBSERVATIONS ON ALBUMINURIA, BASED UPON A STUDY OF SIXTY-TWO CASES SEEN IN PRIVATE PRACTICE.—By Arthur V. Meigs, M.D.,* Physician to the Pennsylvania Hospital. We wish our space allowed us to give this really valuable paper in full rather than in the following abstracts :

That which has most impressed me in this case is the impossibility of making a prognosis, with any degree of exactitude, in most cases of Bright's disease. Of course, in the plainer ones the decision is easy; if asked an opinion in a case with a large, or even moderate amount of albumen in the urine, with increasing heart failure, and evident decline of strength and vitality, with headaches and the peculiar white complexion of the disease, it is easy to prophesy that such a person will not live, and the prophecy, nine times in ten, comes true; if called, however, to decide questions of the future for a young man of thirty-two or three, previously well, but for some weeks complaining of headaches, malaise, and boils, and then examination of the urine shows a slight amount of albumen, granular and hyaline casts, and abundance of rather small oxalates, the question of the future is not so easily decided. I have seen such cases go on pretty well for a few months, then suddenly have convulsions, and die in a few days. Again, persons presenting identical symptoms, after being sick a few weeks or months, entirely recover. To my mind it is impossible, in the present state of our knowledge, to anticipate the future, and the patient should always have the benefit of the doubt, and should be shown the brighter rather than the darker side of the picture.

I know of three persons in whose urine I have found albumen and tube-casts, accompanied with all the other signs of Bright's disease, more than eight years ago, who are yet alive. One, a lawyer, was taken sick in January, 1874, with what appeared to be a bad cold, but he had extreme dyspnea and excessive restlessness and nervousness, although he is usually very self-composed. The dyspnea

* Read before the College of Physicians and Surgeons, Philadelphia, Pa., October 4, 1882.

seemed greater than could be accounted for by the extent of disease of the lungs, which amounted only to a moderate bronchitis; the urine being examined, it was found to contain a trace of albumen, some blood, and tube-casts. It should be said that this man had suffered in previous years with attacks of gravel, when he would pass blood and small calculi. Nearly four years afterward there was still a trace of albumen in the urine, and granular casts, showing that the condition was by no means merely temporary. Ever since he is liable to severe cold, and always suffers more than common with oppression, although it usually takes the form of a common coryza. He is now sixty-four years old, and an unusually young-looking, active man of his years.

In contrast with this case, a woman of about sixty was seized in the night, having gone to bed apparently in her usual health, with an attack of oppression, and what her physician called congestion of the lungs, so violent that it was thought she would die at once; she, however, rallied by morning. An examination of the urine, made a few days afterward, revealed the presence of a slight trace of albumen and casts. Four months afterward there was still a trace of albumen in the urine, and granular and fatty casts, although she was up and about as usual, being merely very weak, having no apparently urgent renal symptoms. At a later examination, the trace of albumen was still found, but no casts. About seven months from the first discovery of the disease, she had another violent attack of oppression, and died in a few hours. Now what are the points to distinguish these two cases? One died after a few months' illness, and the other, having had apparently the same complaint and almost identical symptoms, is, after eight years and a half, still alive, and more, apparently unusually well for his time of life.

In December, 1874, a lawyer in full practice, then about fifty-four years of age, was taken with an attack of acute catarrhal pneumonia, and was also found to have albumen and tube-casts in the urine. He was sick all that winter and the following spring, the urine constantly containing albumen and granular and hyaline casts. The albumen and casts were found in the urine during 1875 and 1876, and part of 1877. On May 2, 1877, about two and a half years from the onset of the disease, there was at last no albumen found, and the microscope revealed nothing abnormal. Since that time there has never been found either albumen or tube-casts, and the patient, now a man sixty-five years of age, enjoys very good health, having had no return of the disease in more than five years.

The third case is a woman, whose father, brother, and two sisters have died of the same disease. She has had a trace of albumen and hyaline and granular casts in her urine since March, 1874, when she was about thirty-one years of age. In February last she caught cold, and seemed for some time upon the verge of a severe renal attack, having coryza, so that her nose was almost entirely stopped, and there were bronchial rales heard in the chest, but an amount of dyspnea, seemingly out of all proportion to the extent of the disease, that could be detected by physical exploration; the albumen in the urine also increased very much in quantity. In some weeks, however, she recovered, and this summer seems in her usual health.

The father of this patient had a severe attack of hepatic colic, and passed several gall-stones in 1877, but afterward he continued in pretty fair health for some time. On May 9, 1879, a trace of albumen was found in the urine; this continued to be present at succeeding examinations, but no tube-casts were found at this time, or afterward, although they were carefully sought for, and about December, 1880, eighteen months from the original discovery of his disease, he succumbed to an attack of uremic convulsions, being seventy years of age. A son and two daughters of this man died of the same disease some years before. The son, after having had dropsy, lived for several years in tolerable comfort, until a severe cold proved fatal. With the history of this son and one of the daughters I am not familiar, but the third one I saw, and she died in convulsions. The condition of this person before her final illness, which lasted only a few days, was in no way different from that of her sister, who is still living, and has had the disease for nearly nine years, and the attack which the surviving one had last March was exactly like those in which I have frequently seen other people die. The presence of albumen and tube-casts in the urine, even when found for so long a time as two years continually, is not, as shown by one of the histories I have detailed, a reason why we should necessarily give a fatal prognosis, and this is particularly the case when the patient is a person past middle life. . . .

A very common symptom of renal disease, and one upon which there is not much stress laid in the majority of books upon the subject, is dyspnea. Whenever a patient is found suffering with dyspnea, and particularly if there is great nervousness and loss of self-control and anxiety, with no other fully sufficient cause for its existence, suspicion of renal disease should be aroused, and the urine examined, even if there are no other symptoms whatever pointing toward a lesion of the

kidney. These attacks of dyspnea frequently come on with great suddenness in persons who have not considered themselves sick, and such attacks are often quite rapidly fatal. This condition has been described as renal asthma, but I believe it much more common than is usually supposed. Another symptom of Bright's disease, which I have frequently noticed and have never heard described, is coryza of such a character that it gives rise to very much greater distress than any ordinary cold in the head. With this there is not much discharge from the nose, but the patient complains that he can get little or no air, except through the mouth, this being accompanied with excessive oppression, much more than the condition would seem to warrant. This symptom was first called to my attention by my father, Dr. J. Forsyth Meigs, in a case we saw together about nine years ago. The suddenness of the onset, or perhaps it would be more correct to say, of the discovery of the existence of this disease, is often very great. In one instance I knew of, a young man, previously supposed healthy, was seized with a convulsion while sitting at the supper-table, this was followed by others, and the case ended fatally in a few days. . . . On the other hand, the insidious nature of this disease, and of its onset, is a matter of such common report that I will not weary you with any cases illustrative of this fact.

The existence of oxaluria or of uric acid lithiasis is a prolific source of mischief to the kidney. The deposit of oxalates, or uric acid, in the kidney, and its passage outward, occurs most frequently in persons who are great eaters, living an inert life and taking but little exercise. Such people are common among the rich in large cities, and I have seldom failed to find tube-casts in the urine of any one who passed gravel for any length of time, whether oxalates, or uric acid, even if the calculi were microscopic in size, and this commonly before any albumen was to be found. Later, if there is any considerable amount of gravel passed, albumen and blood will be found in the urine. If the attacks of gravel occur often, they are apt, at least, to be followed by Bright's disease, directly caused, probably, by the mechanical irritation of the lining membrane of the kidney by the sharp edges of the minute calculi passing through them.

It can not be proved by statistics, and yet I think there is strong ground for believing that the proportion of deaths caused by affections of the kidney is greatly on the increase. The tendency of modern life seems to be such that a large number of deaths are caused by degenerative processes, and less by acute disorders. . . .

We should, in all ordinary cases of albuminuria, be very guarded

in our prognosis, except when it is self-evident that the case must be rapidly fatal. I have now under observation fifteen persons, seventeen, if I count two who have albuminuria alternating or parallel with diabetes mellitus, who have been suffering with this complaint for a greater or less length of time. With three of them the disease began nearly nine years ago, and they either have it now, or have entirely recovered from it, after more than two years continued duration; yet in regard to no one of them do I feel able, even in my own mind to guess, much less to formulate an opinion, as to how much longer they may live. There are absolutely no data, if such cases are considered in the light of the experience of the sixty-two I shall mention, upon which to found a positive prognosis.

Another observation I have made is in regard to the deaths of very old people. . . . I have seen a number of instances in which old people seemed to be fading out, as they often do, yet have felt entirely unable to explain to myself any direct cause for the failure, until the urine was examined, when there was found albumen with granular and hyaline casts, and sometimes a few blood corpuscles. A careful inquiry would perhaps reveal the fact that the amount of urine passed was very small, all this without any other symptom to point toward kidney disease; at the same time, the failure of the patient being very gentle and gradual, or else, as not infrequently has happened, senile delirium existed, either violent or mild in type, followed at last by death.

In the whole sixty-two cases, which I will now summarize collectively, there have occurred twenty-six deaths, thirty-four are, to my knowledge, still living, some in better and some in worse health, and of two I have lost sight.

Five were cases of ordinary acute desquamative nephritis, with the occurrence of one death and four recoveries.

Four cases seemed to be caused by the passing of gravel, principally oxalates. These people are still all living, although they have had albumen and casts present in the urine, on and off, for varying lengths of time; two of them for six years past, one for seven years, and the fourth has had two attacks of nephritic colic about a year apart; on each occasion albumen and granular casts, uric acid and blood corpuscles, were found in the urine.

Twenty-two cases I class as of ordinary Bright's disease, there being probably contracted kidney in the majority of instances, and of them fourteen are dead. I made no post-mortem examination in any of these cases. . . .

The next twenty-two cases I must classify as unaccountable; eighteen of them occurred in persons over sixty years of age, and the other four were well on in life; one was over ninety, three over eighty, and two over seventy years of age. Of these people only five are dead, and of the five fatal cases, one was the man over ninety, two were over eighty, a fourth was seventy-seven, and the fifth sixty-seven.

The next four cases were of people advanced in life, and they died of general break-down, having in three instances concurrent disease of the heart and kidneys with implication of the lungs, and the fourth had renal and brain disease.

In two instances there has been albuminuria with diabetes mellitus; in one sugar was discovered in the urine six, and in the other four, years ago. . . .

In one instance I have followed for four years the history of a man who drinks to excess. At the beginning of, and for a time before, his attacks of delirium tremens, while he is consuming alcohol freely, he often has bloody urine, which will contain tube-casts of all the varieties at different times, fatty, hyaline, and granular. When he ceases his consumption of alcohol, as he has quite frequently done for two or three months at a time, the urine becomes normal as far as chemical tests and microscopists' examinations will reveal its condition. In the light of this case, how can we believe that the abuse of alcohol does not produce its renal degeneration? Is not this man sure to die of Bright's disease if he continues his indulgence in alcohol?

Another case was a man, over fifty years of age, who was seized with rheumatism; he progressed badly, and was much more sick than the amount of rheumatism would seem to warrant, and at last, after about three weeks, died, having obstructions of the bowel and inflammation of the kidneys, as shown by the presence of albumen and tube-casts in the urine, also hydrothorax and extreme stupor, which seemed uremic. . . .

There has been much said of later years about kidney disease without the presence of tube-casts in the urine, and of the presence of casts without albumen. I may say that I have frequently found tube-casts in the urine when the most careful chemical examination failed to detect any albumen, and, *vice versa*, have failed to find any casts at all when the event proved the existence of renal diseases.

In conclusion, I will briefly recapitulate the points which it has been my endeavor in this paper to prove :

1. That in no ordinary, uncomplicated case of Bright's disease should a prognosis of speedy death, or even of incurable disease, be given, for I have related cases in which the disease was chronic, lasting more than two years, and which ended in complete recovery, and others in which the person affected has lived nine years.

2. That dyspnea, usually taking the form of renal asthma, is much more common than is usually supposed, and when properly appreciated is a valuable diagnostic sign of the disease; also that severe coryza is a complication or accompaniment, and has a diagnostic value.

3. That Bright's disease as a cause of death is on the increase.

4. That it is a very common cause of the deaths of old people, probably being the direct cause in many deaths reported as of old age.

5. That the passage of gravel, even when microscopic in size, but particularly if large enough to cause nephritic colic, is a prolific cause of the disease.

6. That the occurrence of tube-casts in the urine, without, or in advance of, the presence of albumen is very common; and, *vice versa*, persons may die of Bright's disease, and the most careful examination fail to show any tube-casts, although there may be albumen constantly present in the urine.

7. That the abuse of alcohol is certainly a cause of kidney disease, as proved by the case I have related, in which it has, again and again, caused hemorrhage from the kidney, with the temporary presence of albumen and tube-casts in the urine, disappearing again with the cessation of its consumption.

SPONGE GRAFTING.—Dr. W. L. Estes, of South Bethlehem, Pennsylvania, contributes to the Medical News an interesting article on the above subject, from which we extract the following. Dr. E.'s experiments were made with very small bits of sponge as grafts on ulcers:

I use fine surgical sponges thoroughly cleansed, carefully washed in cold water, and then soaked in dilute hydrochloric acid for forty-eight hours; after this, carefully washed in several relays of cold water, in order to remove the acid entirely; and lastly, put into a well-stoppered jar filled with five-per-cent solution of carbolic acid. They must remain in the five-per-cent solution for at least a week, and are then ready for use. In grafting, the ulcer is carefully disinfected with a two-per-cent solution of carbolic acid, taking care not to rup-

ture any capillary, for I have found that hemorrhage into the bits of sponge seems to prevent their absorption. Hands, instruments, and every thing likely to come near the ulcer, must also be carefully disinfected. As many pieces of sponge as are desired are now snipped off and allowed to fall into a basin of two-per-cent solution of carbolic acid. With a pair of forceps these are successfully removed and carefully laid among the granulations; when they are all applied the ulcer is covered with a piece of "protective," and a full Lister dressing applied. The size of the pieces used is about one tenth of an inch—about the size of an ordinary skin-graft. The dressings are generally removed on the third day, reapplied; and the subsequent dressings made as the case requires. Strict antiseptic precautions should be kept up for a week at least. On the third day I have found all the grafts are firmly adherent. If examined carefully at this time with the unaided eye, it will be noticed that each graft is surrounded by a faint white zone, which by a magnifying glass is resolved into radiating bands of lymph inclosing minute blood-vessels which run into the sponge. If now a piece be removed, it will be found pretty firmly fixed, and its removal will be followed by quite an appreciable hemorrhage. Examined microscopically at this time, the interstices of the graft are seen to be pierced in every direction by a network of capillaries, and a number of large nucleated cells permeate its whole substance. After seven days the bits of sponge are seen as small white points in the granulations, entirely covered by lymph and firmly embedded in the granulations. At this time it is difficult to remove them. If a piece be removed, the circumference will be seen to be very ragged, the piece itself seeming to be diminished in size. Examined microscopically the capillaries and large nucleated cells fill the sponge every where and the proper sponge substance is beginning to disintegrate. From this time they are steadily absorbed. In fourteen days they are usually not to be seen, or only indistinctly under the granulations. While it is the rule for all the grafts to be absorbed, it has several times occurred that after hemorrhage into them, either from placing them too roughly upon the granulating surface or by attempts at the removal of one of them, after skin had formed over them, a circumscribed ulcer would form at the site, which would close immediately after the removal of the bit of unabsorbed sponge. The explanation of this doubtless is that the extravasated blood, coagulating within the meshes of the sponge, prevents vascular and cellular infiltration of the piece, the *sine qua non* of its absorption and desired encouragement to cicatrization. Of course impurities of

any kind would have a much worse effect, hence great care should be observed in preparing and placing the grafts.

So far I have grafted seven cases—not selected for any particularly favorable feature in the ulcers, but all average, indolent ulcers, resulting from severe injuries and arrived at that state of chronicity where nature seems to wait in patient expectation of the surgeon, by art, rejuvenating tissues she has worn old and callous in her attempts at repair. One of Dr. E.'s cases was an ulcer of the thigh, measured 10 by $6\frac{1}{2}$ inches, was grafted July 30th. Ten grafts were applied three quarters of an inch from the margin of the ulcer. They were applied only on the sides, not at the ends or in the center. August 2d, dressing removed for the first time. All the grafts firmly adherent; the lymph-tracts and blood-vessels distinctly seen entering the sponge-bits on every side. The raised hard edges of the ulcer disappeared, and on both sides, the whole extent, a flat faint blue edge sending numerous little capes into the sea of granulation. August 10th, most of the grafts already covered by skin, the others entirely embedded in the granulations. August 12th, ulcer measures $9\frac{1}{2}$ by 3 inches; regrafted with twelve grafts placed as before. Within three weeks the ulcer had contracted one half inch length-wise and $4\frac{1}{4}$ inches laterally. It will be observed that at both graftings the grafts were placed on the sides of the ulcer and the contraction or cicatrization of the ulcer had been principally lateral. August 22d, again grafted, using sixteen pieces, placing some at either end and in the center as well as on the sides. September 1st, only ten pieces of sponge can be located; two distinct islands of skin beginning. A fourth grafting was done September 8th. October 8th, ulcer one half inch by 4 inches, to be treated in out-door department. October 25th, ulcer about entirely cicatrized.

A comparison of the two methods results in the following conclusions, to-wit:

1. Sponge grafts are available when skin can not be obtained. They do not cause pain in preparing them, nor any annoying little wounds as additional tax upon the healing powers of the patient. They do not subject the recipient patient to the danger of inoculation of specific diseases, as skin may do when taken from a cachectic donor.

2. Sponge grafts take more surely; invariably, when proper care is exercised.

3. Sponge grafts stimulate marginal activity much earlier and to a much greater degree than skin.

4. In sponge grafting skin or cicatricial islets are much slower of formation and not as sure as after skin grafting.

5. Healing seems equally if not more rapid with sponge grafts than with skin.

6. Resulting cicatrices are equally good and contractions equally prevented.

THE OLEATES IN SKIN DISEASES.—Dr. John V. Shoemaker, Physician-in-charge to the American Hospital for Skin Diseases, in Philadelphia, has kindly sent a pamphlet with the above title, taken from advance sheets of Transactions of the Pennsylvania State Medical Society, and which we find of such real value that we insert it almost entire.

Oleates must not be considered merely as solutions of oxides in oleic acid, as previously described. While the oleic solutions could not have therapeutically presented results different from those of the oxides employed in solution, the oleates themselves present a much different action by being in a chemically readily-diffusible state.

These salts, while possessing more efficacy at once, are of a stable character, very different from the oleic solutions heretofore used; and by containing less of the expensive oleic acid they are therefore less costly.

Dr. Lawrence Wolff, of Philadelphia, has found the best and most ready method for preparing oleates to be by the double decomposition of sodium oleates with solutions of neutral salts, and, as a general method of their manufacture, proposes the preparation of the former by a saponification of oleic acid with a solution of sodium hydrate. A solution thereof in eight parts of water is then precipitated by the salt required; this precipitate, washed and dried, yields the oleate required.

Oleate of Mercury. Oleate of mercury is prepared by precipitating a solution of sodium oleate with mercuric chloride. Or a mercuric oleo-palmitate may be derived by using the sodium oleo-palmitate instead. The precipitate will readily form on boiling the solution. It may, for use, be mixed with either the paraffinates, or, better still, lard or lard oil. An ointment containing one part oleate to three parts lard will give what I term a twenty-five-per-cent ointment of oleate of mercury; while, if mixed with equal parts of lard oil, it forms a fifty-per-cent ointment.

It is the best local stimulant and alterative application of all the

mercurials. It is a yellowish chemical combination, with a fatty smell, and of an unctuous consistence. It will produce, when used on the unbroken healthy skin, marked stimulation bordering on congestion; while upon any tumors, indurations, glandular enlargements, and thickening of the skin, it has a most valuable resolvent and alterative action. Its advantages over the old mercurial ointments now generally in use are:

1. Its chemical combination, which makes it better absorbed by the skin.
2. Its solubility in fats, contrary to the suspension of other mercurials therein, gives it great penetrating and absorbing action, manifesting itself in prompt remedial effect.
3. It possesses also the advantage of obviating the rancidity which is sure to occur with other mercurial ointments.
4. It is more economical and cleanly. It is more economical—as a small piece suffices for its remedial action. It is cleanly—for by its rapid absorption into the tissues it will not stain the linen.

In the inunction treatment of syphilis, which has unjustly fallen into disuse, this oleate can be advantageously used, especially when there is derangement of the gastro-intestinal canal. It can be applied in a simple, cheap, and clean manner, when the patient retires at night, by gently rubbing in a small portion of the stronger ointment, about the size of a small marble, on the thighs, the limbs, or on the sides of the trunk. It will be rapidly absorbed, will only leave a reddened surface on the skin, and will not dirty up the linen, or cause the vexatious routine method of old mercurial-inunction treatment. It will, however, be necessary to apply cautiously this powerful remedy, as its deep penetration into the skin, and its quick diffusion, will often bring about more rapid constitutional effect than the ordinary mercurial ointments.

I employ it with success in indurations after abscesses; in excess and deficiency of pigment, either as a disease, or from applications, or as an effect of disease; in indolent papules, tubercles; in obstinate ulcers, particularly the syphilitic; and in cases of enlarged testicle. In the indolent and chronic stage of psoriasis, in which the patches are thickened, harsh, dry, and cracked, the application of the oleate causes them to rapidly disappear. It is necessary, however, in case of psoriasis, before applying the oleate, to remove the scales by alkaline baths, oils, water-dressing, or wet packing. In all forms of vegetable parasites the oleate, lightly smeared over the surface, will not only kill the parasite on the surface, but will frequently, by its

great penetrating and diffusive action, pass into the hairs, the follicles, and sebaceous glands, and destroy the fungus that may have been propagated beneath the skin. In phthiriasis, or lousiness of any part of the body, the oleate destroys alike the parasite and the nits, which sometimes escape other mercurial preparations which are suspended in a mechanical way.

Lastly, the oleate of mercury may be employed advantageously in combination with other oleates. Thus, ten or twenty grains of it, mixed with one dram of the ointment of the oleate of lead, is often very effective in chronic acne and eczema, especially in the fissured variety of the latter, which is so common on the plantar and palmar surfaces. In all the syphilitic skin eruptions, and in superficial ulcers, one dram of the oleate of mercury with three drams of the oleate of bismuth, or the same quantity of the ointment of the oleate of lead, acts quickly and decidedly. The oleate of mercury, in the proportion of one or two drams to one ounce of oil of ergot, forms one of the best and most efficacious oily applications that can be used to that common affection, loss of hair, in which the scalp, or the parts on which it occurs, looks harsh and dry, the hairs being dull and lacking their peculiar luster.

Oleate of Zinc. Oleate of zinc is made by decomposing a sodium oleate with a saturated solution of zinc sulphate, boiling out and drying the precipitate, and then reducing it to an impalpable powder, which is rapidly accomplished. One part thereof, melted with three parts of a fatty vehicle which yields the ointment, I have been in the habit of using. I have obtained, however, the very best results with the oleate of zinc alone, and not mixed with a fatty diluent, which is a fine pearl-colored powder, with a soft, soapy feel, very much like powdered French chalk.

When dusted over a denuded surface it will have, by the combination of the oleic acid and zinc, a stimulating as well as an astringent action. It is *par excellence* the remedy for excessive sweating, or in cases of hyperdrosis and osmidrosis. I have been using it for more than a year, dusting it over the surface in patients suffering from an increased flow of sweat about the palmar and plantar surfaces and around the axillæ and genitalia. It has relieved and permanently cured some of the most distressing cases suffering with excessive secretion about the feet, in which the epidermis had macerated and peeled away, leaving a tender and exposed skin, and giving rise to a very disagreeable odor. It is likewise most efficacious as a lady's toilet powder, particularly to those who are afflicted with shining faces in

the summer, called seborrhea oleosa. It is the most valuable and the most reliable remedy in that commonest variety of eczema, known as eczema visiculosum. I have witnessed marvelous results from dusting the oleate over those in whom the extremities, and even the trunk, had been covered with small vesicles, swollen, hot, inflamed, the parts constantly weeping, and the itching so intense that the patient would rub and scratch the surface until it had become perfectly raw; in such cases I have frequently seen the discharge dry up, and the swollen and inflamed skin resume its normal condition, by the threefold action of the oleate in protecting, stimulating, and astringing the parts. If this oleate be dusted on an inflamed surface that is hot and tumid, such as is found in erythema about the groins and axillæ, and in herpes, particularly of the genitals, it will cling to the skin and will not fall or brush off like ordinary dusting powders. These advantages prove beyond a doubt the superiority of the oleate of zinc over the ordinary ointments and powders in the class of skin eruptions I have just named.

Oleate of Lead. Lead oleate is derived by precipitating a sodium oleate with a solution of lead sub-acetate. The washed and dried precipitate, melted with equal parts of lard, gives the ointment I designated as ointment of lead oleate.

The ointment of the oleate of lead is cream-colored and semi-solid, of the consistence of simple cerate. It has, when applied to the denuded skin, both a combined sedative and astringent action, and will arrest morbid discharges, protect the surface, and allay irritation. It is also more readily absorbed than either Goulard's cerate or Hebra's litharge ointment, and it is more easily and cheaply prepared. It is of the greatest benefit, and often very successful in allaying the inflammation and checking the discharge and itching of postular eczema that is so annoying to young infants. In papular eczema, and in that variety of the same affection that is often found in the flexures of the joints, around the axillæ, the inner part of the thighs, and the perineum, this oleate very effectually allays the intense irritation, and very often quickly restores the parts to their natural healthy state. It is a useful remedy in simple lichen, and in those hard, indurated papules in acne about the face and back, and in the second stage of rosacea; and its value is often very much enhanced in these affections to add to two drams of the ointment about one dram of the bismuth oleate. It has very often a beneficial effect in that well-known fissured form of eczema present on the palmar and plantar surfaces. Should, however, the inflammation and cracking be very

severe and deep and require a marked stimulation, the addition of twenty or thirty drops of the oil of cade to two drams of the ointment of this oleate will increase very much the curative action on the parts. In ordinary cases of scabies or itch, four drams of this ointment, mixed with half a dram of milk of sulphur, yields more promptly than when the latter salt is combined with other bases. The ointment of the oleate of lead soothes the irritation set up by the parasite, while by its great penetrating action it carries the sulphur deeper into the skin, and permits the latter ingredient to act more decidedly on the parasite.

Oleate of Copper. Copper oleate is obtained in a similar manner as the lead oleate, by double decomposition with a saturated solution of copper sulphate. The washed precipitate, melted with either four or nine parts of cosmoline, fat, or lard, gives respectively a twenty or ten per cent of oleate of copper ointment.

When applied to the unbroken skin, the oleate of copper ointment rapidly penetrates deeply into the parts, particularly into the follicles, and will produce slight stimulation. On the other hand, if brought in contact with broken skin, which it stimulates, an insoluble albuminate is formed, which coats over the surface and supplies the place of the abraded skin.

The most successful results that I have as yet had with the ointment of the oleate of copper has been in rapidly curing cases of ringworm, both on the scalp and body. The ointment of the oleate of copper should generally be used in cases of ringworm, in the following manner: The parts should be first washed with soap and water, and, in case the hairs be involved, the hair should be cut short, and, after drying, a small piece of the ointment of this oleate, in proportion to the size of the patch, should be lightly rubbed over the surface. The same procedure should be repeated night and morning until all traces of the disease have disappeared. The parts should only be washed about once in ten or twelve days, as the frequent use of water may prevent the oleate from penetrating to the lowest depth of the follicle in order to successfully destroy the fungus. It may also be necessary to pluck out the diseased hairs or depilate in very inveterate cases, although I have cured some without being compelled to get rid of the diseased hairs in this manner. If this method is carefully followed, the oleate just named will no doubt effect a complete cure in some of the most obstinate cases. I have also used this ointment, spread on old muslin, for indolent ulcerating surfaces, and have found it an excellent cleanser and healer. It acted by condensing the tissues and

constricting the blood-vessels, and thus lessens the determination of blood to the part. It will relieve, and some of my patients have reported cures from its application to hard and horny warts, corns, and bunions.

Oleate of Aluminium. Aluminium oleate is also prepared by decomposing sodium oleate with aluminium sulphate; the washed precipitate, mixed with equal parts of lard, gives the ointment of aluminium oleate I shall speak of. The ointment thus prepared is semi-solid, dark brown in color, and has a most powerful astringent action. It has the most decided action of all the other oleates in checking muco-purulent discharges that occur in one of the varieties of eczema. For this purpose it can be applied with advantage around the arms, groin, or buttock of those who have excessive discharge from the friction of those parts, particularly in infants and children, and so check the profuse secretion, or bring the parts into a suitable state for other remedies. It can also be employed with success as a dressing in foul ulcers, abscesses, sinuses, burns, and scalds, from its power to coagulate albumen, constrict the vessels by its antistypic action and checking or correcting the secretion of muco-pus.

Oleate of Bismuth. Bismuth oleate can only be obtained by first preparing a crystallized bismuth nitrate, dissolving it in glycerine, and decomposing with this mixture the sodium oleate. It is of ointment consistence, and should be used as thus obtained.

It is a pearly gray and soft bland ointment. It possesses an emollient and slightly astringent action, and is a most valuable remedy in soothing and relieving cutaneous irritation.

In pustular eruptions, particularly in sycosis, the oleate of bismuth, lightly pencilled over the surface with a camel's-hair brush, will greatly relieve the engorgement of the parts; it will also often abort the pustules, and will cause to disappear the pricking and itching feeling that so often annoys and wears out the patient. It is equally efficacious in superficial erysipelas, and in sunburn, by soothing and relieving the high inflammatory action of the parts. The various varieties of eczema, especially that form, the papular, which is usually met with in the flexures, are very amenable to the application of this oleate. It is particularly useful pencilled over rosacea, or what is commonly known as a chronic inflammation of a portion of the face; it often subdues intractable cases of this disease, although I apply the ointment usually after thoroughly depleting the parts with a needle-knife. It soothes the hyperemic skin, relieves the engorgement of the glands, and thus brings comfort and ease to the patient. It will

also, when applied freely over the surface in cracked and sore nipples, not only soothe, but will arrest the dry and excoriated condition of the parts.

Although bismuth, in the form of a mixture, has long been used as an injection in sub-acute gonorrhea and gleet, yet I know of no medicine that will act so well in many cases of these affections as the oleate of bismuth. I have found it very serviceable in sub-acute gonorrhea and gleet to pass a bougie covered with the oleate of bismuth, and allow the instrument to remain in the canal for a few moments. In more obstinate cases, I have had good results in wrapping a wax bougie with a thin layer of cotton, covering the surface with oleate of bismuth, and passing the combination into the urethra.

Oleate of Iron. Precipitate with ferrous sulphate from sodium oleate on boiling is soon converted into ferric oleate, and as such may either be used pure, or if mixed with an equal amount of a fatty base, as my ointment of iron oleate.

When prepared in the above manner it occurs in a reddish brown paste, inodorous, having a styptic taste, and readily soluble in fats which hold in combination about thirty per cent of the oxide of iron, forming a powerful and important therapeutic remedy.

It is free from local irritation when used topically, but when brought in contact with an ulcerating surface it has a very mild astringent action. It can, therefore, be used, as I have tested it, both for a constitutional and local effect. I have already had some excellent constitutional (systemic) results by having a small piece of this ointment rubbed in the axillæ and inguinal regions two or three times a day. The effect of this ointment has been very good on some upon whom I have applied it, who had a deranged state of the digestive organs and inability to bear the ordinary chalybeates, weak pulse and a pale and flabby condition of the skin. I have also been using it with marked effect in some cases of scrofula. I am now testing its therapeutic action, not only in cutaneous affections but also in many other diseases, from which I expect shortly to hear favorable and satisfactory results. It will, no doubt, take the place of other chalybeates, particularly when the latter are not well borne by the digestive organs, and will probably constitute one of the best constitutional tonic and local astringent remedies.

Oleate of Arsenic. Arsenicum oleate must be derived by making arsenious chloride by the cautious saturation of hydrochloric acid with arsenicum metal. The solution thus obtained, precipitate from

sodium oleate the oleate required, which I employ in the quantities of twenty grains to one ounce of fatty base, as my ointment of arsenicum oleate. It is in this form a soft yellowish ointment, having no change on the skin except where abraded, or in wounds, ulcerating and granulating surfaces, in which condition it will excite active inflammation and destroy the tissue of the parts to some depth. In lupus, especially the ulcerating varieties, the constant application of the ointment of arsenicum oleate will destroy cell-infiltration in a mild and comparatively painless manner. It may be applied with almost as good result in the tubercular form of lupus, providing the parts be thoroughly scraped so as to bring the oleate in contact with an abraded surface, which will greatly enhance its action. It can be used very satisfactorily in the ulcerating variety of epithelioma, and will be better borne for a longer period to the parts than any other form of arsenic. I have likewise employed it after puncturing or scraping the surface to destroy warts, condylomata, nevi, corns, horns, and old granulations. In some instances I have incorporated in this oleate, with a very happy effect, opium, belladonna, hyoscyamus, and arnica.

Oleate of Silver. This new oleate, like the others, is prepared by precipitating the sodium oleate with a saturated solution of silver nitrate, washing the precipitate with boiling water and drying it, after which it is reduced like the zinc oleate to a fine powder. One dram of this, dissolved in an ounce of fatty vehicle, forms what I have employed as ointment of silver oleate. Made in this manner it occurs as a pulverulent salt of brownish-yellow color, which, if mixed with lard in the proportion from ten to sixty grains of the oleate of silver to one ounce of lard, forms a dark brown, soft, and pliable ointment.

This oleate in its natural form, sprinkled over old chronic ulcers, bed-sores, and exuberant granulations, will set up a healthier state in the parts. The best effects I have experienced from using the ointment of this oleate, which not only coats over an abraded surface by combining with the albumen, and so protecting it from the air, but it also causes powerful contraction of the blood-vessels and thus condenses the tissues. It is a safe and efficacious remedy in erysipelas, and can be used either around the margin to prevent the inflammation from extending, or can be applied weak, ten to twenty grains to one ounce of lard, over the inflamed surface. It has reduced the active inflammation by being constantly applied in several cases of the superficial variety of lupus. It will be serviceable applied to boils and carbuncles, and may often arrest pustulation in its early stage. An intolerable itching that sometimes occurs around the

meatus auditorius, the anus, and the genitalia may often be quickly relieved by applying this ointment either alone or combined with opium and belladonna. The advantages that the ointment of the oleate of silver possesses over the ordinary silver ointments are, its stability and prompt action, and by being less painful and milder in its curative action, and still penetrating deeper into the affected part.

The *oleates of quinine*, and those of *morphia*, and also *atropia*, are made by precipitating a sodium oleate with the aqueous solution of these salts: and for use should be mixed with the requisite amount of either olive or lard oil.

I have thus, in a brief and practical manner, endeavored to describe for the first time the therapeutic action of chemically true oleates.

They enjoy the widest range of therapeutic application. The superior advantages which they possess over the ordinary ointments I will consider under the following five heads:

1. Their deep penetration. The oleic acid in their combination gives them active solvent powers and facility and ability to penetrate rapidly into animal textures, while rendering any chemical ingredient with which it is combined more active and effective in dermic medication.

2. Their freedom from rancidity. The same acid held in the combination, will always keep the fat, with which the oleate is mixed, pure, sweet, and free from rancidity.

3. Their cleanliness of application. The rapid absorption of the oleates into the tissues will prevent any unpleasant disfigurement of the parts, will not stain the linen, and will give comfort and ease in their application.

4. Their great economy. The oleate should not be rubbed in vigorously like the ordinary mechanical ointments, which require considerable friction; they only require to be lightly smeared or applied over the surface in very small quantities, hence their great economy.

5. Their antiseptic action. The oleic acid in combination has also a most happy and effective action in rendering the oleates antiseptic or deodorant upon all discharges and suppurating surfaces.

In addition to the great advantages just enumerated, the oleates likewise possess the power of having incorporated into them almost any ingredient that can be used in dermic medication. Such preparations in different proportions, according to the amount desired to

be used, as carbolic acid, creasote, sulphur, tar, arrow-root, starch, iodine, iodide of potassium, chloral, camphor, belladonna, opium, hyoscyamus, nux vomica, ergot (particularly the oil thereof), cinchona, etc.

In infantile eczema the following is often used :

R Unguenti plumbi oleatis, $\frac{3}{4}$ ss;
 Pulveris marantæ, $\frac{3}{4}$ j;
 Cerati simplicis, $\frac{3}{4}$ ss;
 Olei olive, q. s.
 Ft. unguentum molles.

M. S. Apply lightly over the surface, and in case of much pustulation of the surface or a swelling of the glands the addition of one half to one quarter of a dram of the oleate of mercury to the above will be very advantageous.

Further, the active inflammation of the blood-vessels and tissues of the face, as in rosacea, may be checked by :

R Unguenti plumbi oleatis, } $\frac{3}{4}$ j.
 Bismuthi oleatis, }

M. S. Apply a very small piece, about the size of a toilet-pin, night and morning. If the parts should become much thickened and indurated add one or two drops of creasote.

In eczema of the anus, particularly when the trouble is due to external piles, the following will give very great relief from the incessant and intolerable irritation of the parts, and often cure the disease:

R Bismuthi oleatis, $\frac{3}{4}$ ij;
 Extract opii, gr. x;
 Extracti belladonnæ, gr. x;
 Cerati simplicis, $\frac{3}{4}$ ss.

M. S. Apply frequently.

I wish to add, in conclusion, the objections—for an emollient and soothing action—to using the commonly accepted applications to the skin that are now used, often ineffectually and at times injuriously. These objections are, first, to the ordinary ointments, and, secondly, to the petroleum products.

It is well known that the ordinary ointments have no power of penetrating deeply into the derma; that the combinations which they form with other ingredients with which they are incorporated are usually mechanical, and as a result the fat and the drug are usually found after application caked upon the outside, fulfilling very often only the part of a protection to the diseased surface beneath. They also, by the collection upon the surface, soil the linen, run off or trickle down upon other parts, interfering with cleanliness

and often disfiguring the person. Ointments likewise, kept for any length of time, will become rancid, and if applied in such a decomposed state, which I have seen in many instances, will excite continued inflammation. Again, ointments must necessarily be costly, as they are usually prepared and prescribed in large quantities, and as considerable amount is required to cover a given spot or surface, allowing for the waste on the adjoining parts and that which runs off and stains the linen.

I next pass to the consideration of my objections against using the petroleum preparations. These products are as objectionable as bases as the other ingredients usually used for ointments. They even possess feebleness power to penetrate the skin, if any at all, than animal fats which have more affinity for the integument. They are also simply melted by the temperature of the parts, and run off largely on the surrounding surface, and will thoroughly saturate all the linen brought in contact with them. Further, the petroleum products retain some stimulating constituent, left after their manufacture, which will prevent them from having an emollient action, and which proves a very great hindrance to their use as external remedies, providing you wish to soothe and allay active inflammation. In addition to this, I will state that the craze for these paraffinate or petroleum products seems gradually on the wane, not only here but also in Europe.

In investigating this subject I have found that their absorptive power for a penetrating action into the skin is so feeble as to almost cause them to be excluded as such. Irritant ointments of veratria and other substances which I had made respectively of cosmoline, vaseline, and of simple cerate, manifested themselves in the former two preparations as almost inert; while the activity of that made with simple cerate very soon became evident. I am pleased to find an eminent authority, Dr. Herrman Hager, make a similar statement: "The use of vaseline (cosmoline) in place of lard or an ointment in such mixtures, which contain a remedial agent intended for absorption by the skin, is much to be discouraged, as vaseline (cosmoline) prevents absorption thereof."

All the objections, both to the ordinary ointments and the petroleum products, are overcome in the active solvent powers of the oleates—their deep penetration, their chemical combination, their freedom from rancidity, their great economy, and their antiseptic properties. A great drawback, however, to the general adoption of the oleates will be the lack of knowledge that the majority of pharmaceutical chemists have, at the present time, of their manufacture.

ON THE RADICAL CURE OF HERNIA BY REMOVAL OF THE SAC AND STITCHING TOGETHER THE PILLARS OF THE RING.—Mitchell Banks, Esq., Surgeon to the Liverpool Royal Infirmary, read at the last meeting of the British Medical Association a paper on this subject which we are sure will give fresh interest to this very important subject. We copy largely from his essay :

What is meant by a radical cure? In the strict sense it means that the patient shall be restored to the original state of integrity in which he was before the hernia appeared. If a man have a hernia which no truss will keep up, which is a perpetual source of misery to him, and which prevents him from earning a living; and if, by an operation you put that man in such a condition that, with a light truss, he can go about his work in comfort, I think the title of "radical" should hardly be grudged to such an operation. While therefore no patient, who after an operation is still obliged to wear a truss, can strictly be said to be radically cured, yet his condition is so little different from that of a sound man, and so enormously better than his previous state when a truss was useless, that to him the operation has been much more than palliative. It has been practically curative, and so in that sense radical.

Professor Anandale, in December, 1880, contributed an admirable article on the radical treatment of rupture to the Edinburgh Medical Journal. He there enumerates four operations that have been performed on the sac: (1) Ligature of the neck of the sac alone; (2) ligature of the neck of the sac, with invagination of the ligatured sac into the abdominal opening; (3) ligature of the neck of the sac, and excision of the sac below the ligature; (4) ligature of the neck of the sac, with excision of the sac and stitching together the margins of the abdominal opening. He says: "Having used all these methods I have no hesitation, from my experience, in giving preference to the fourth plan." This is the plan which I have myself adopted; and I have no hesitation in saying that it is the best plan yet found out, and the one which will in a short time prove by far the most popular. It is applicable to every case of hernia that requires to be interfered with, and every surgeon can do it.

In performing it I use thorough antiseptic treatment, and make a point of having the pubes and parts around the anus most carefully shaved. In an inguinal hernia, the incision should commence at least an inch above the upper margin of the external ring, so that plenty of room may be given thoroughly to clear the pillars for the stitching.

The sac is next freed from the surrounding tissues, and this is often much more troublesome than might be imagined. One is almost always tempted to think that it has been reached long before it really has: so that frequently after a considerable amount of stripping has been done it is found that it is not the sac at all that is being cleared, and the process has to be done over again. It is this mauling of the loose cellular tissue of the scrotum that gives rise to nearly all the trouble that occurs in the way of suppuration. The sac ought to be fairly reached before any stripping of it is done. Another point is that in the case of an old sac the lowest point is intimately adherent to the tunica vaginalis; and if it be roughly pulled upon, the testicle inclosed in the tunica comes bodily out of the scrotum—not a very serious matter it is true, but unpleasant to look at. The sac having been cleared, its contents are pressed up into the abdomen. When it is thin there is no difficulty in making sure that it has been completely emptied; but if there should be the slightest doubt it should be slit up and its interior examined. Adherent omentum if in small quantity I separate carefully, tie in catgut in one piece and cut off; if in large mass I split it up into two or three portions, and ligature with carbolized silk to insure a good knot that will not slip. One can not be too careful about the securing of the omental stump before it is finally pushed into the abdomen, and every drop of bleeding should have ceased both from the omentum and from the neck of the sac before the next proceeding. This consists in pulling the sac well down and tying it as high up as possible. I use two ligatures of strong catgut, as that material is apt to be treacherous. In case any thing should happen to one the other is there. With a curved needle, armed with strong silver wire, I next pull together the pillars of the external ring, leaving only room for the spermatic cord at its lowest part. Two or three stitches suffice. These are cut short off and left *in situ*. A clean carbolized sponge put beneath antiseptic gauze for the first twenty-four hours makes the best dressing.

The only point of novelty for which I take any credit to myself in this operation (and very likely others have done it as well as myself) is the use of strong silver wires to draw together the pillars of the ring, which is left permanently in position. Catgut I distrust where there is any strain upon it; it yields too soon. Silver wire seems to bury itself so harmlessly that I can not see any objection to it; while it must of necessity hold the pillars together for a considerable time, until they are well agglutinated. I tried magnesium wire once with the idea of its oxidizing and disappearing, but it was too brittle; and,

after all, silver wire is just as innocuous. In the case of femoral hernia I content myself with mere removal of the sac, as the introduction of sutures to pull down Poupart's ligament to Gimbernat's would be very troublesome, while there is not the same necessity for suture that there is in inguinal hernia. The femoral rupture is very rarely so large as the inguinal, and consequently the femoral ring is not dilated so enormously as the inguinal canal is, while its walls are more rigid and unyielding.

In estimating the merit of an operation, which is not one of necessity, but of expediency, the first thing to be considered is the danger which it involves. I have now performed it in thirty-two cases, of which the table gives the particulars of thirty. In twenty-one it was done directly for curative purposes, and in eleven it was done as part of the operation for strangulated hernia. The latter cases clearly can not be taken into account in considering the danger of the operation, but they are of value as showing its effect from a curative point of view, and therefore require to be mentioned. I can safely say that nobody has died as a direct result of it. One patient with strangulated inguinal hernia succumbed from collapse; but, as I have just pointed out, in that case the radical cure was a mere addendum, and can not be held responsible for the death. In one of the instances of radical cure for relief, the patient, as was subsequently discovered, was a dissipated man. He was broken-down in health and was the subject of locomotor ataxy. His hernia however gave him so much distress that he was most desirous of having it cured. He recovered from the operation without the slightest bad symptom. The wound was healed, all but a minute portion at the upper end; and he was going to get up on the following day, when he suddenly became ill with delirium, dilatation of one pupil and other symptoms, which finally ended in coma and death. In no way could I directly trace his death to the operation, as his condition might quite well have come on independently of any thing having been done for him. Although permission to examine the body was not obtained, we inspected the abdomen. The only thing amiss with any of the abdominal organs was the fact that the spleen was soft. The removal of the hernial sac had made the peritoneal lining of the abdominal wall absolutely smooth. The pillars of the ring were agglutinated together with lymph in such a way that the inguinal aperture was completely closed, and in the lymph the sutures were deeply buried. Although it was a subject of great vexation that what I feel certain would have proved a permanent cure was thus prevented, nevertheless there was a satisfaction in find-

ing that the operation is evidently capable of producing a thorough occlusion of the ring and of restoring the uniformity of the peritoneal wall.

At the present moment I believe the choice of an operation for the radical cure of hernia lies between Mr. Spanton's method and that which I am now advocating. Quite recently, in the *British Medical Journal*, that gentleman has published a record of thirty-four cases which deeply interested me as affording an excellent basis of comparison between the two plans. In the first place, looking at the ages of the persons operated upon, of the thirty-four twenty-two were children below eleven years of age, and the remaining twelve were young persons between the ages of thirteen and twenty-seven. Turning to my thirty cases, it will be found that twenty-two were between thirty and sixty-four years of age, and six between eighteen and thirty. Only once was the operation done upon a child. Mr. Spanton very candidly says: "The most suitable cases are, I think, those occurring among the young." But many may question whether the young need to be operated upon at all except in very rare cases. Personally, I must confess that I have a strong belief that in children under ten years of age a well-fitting truss, worn constantly to the age of fifteen, will cure the great majority of their ruptures. Nevertheless, there are cases even in children which demand operation; and to these Mr. Spanton's operation seems admirably adapted, inasmuch as the patients are always thin, with their fiber firm and in good condition, and seldom troubled with cough. To keep the hernia up the restraining force required is seldom great, and a moderate amount of irritation will suffice to close the neck of the sac, and so effect a cure.

Passing from the age of the patients to the character of the complaint, it will be observed that Mr. Spanton can do nothing with ventral, umbilical, or femoral hernia; he can only attack the inguinal variety. All inguinal ruptures? By no means. Only those cases where the sac can be first thoroughly emptied and then invaginated, and that is why his patients are young men and little boys. But, turning to the occupations and condition of my patients, it will be seen that they are persons well on to the middle period of life, or over it, at an age when the vigorous fiber of youth has become yielding and flaccid, and when corpulence and weak tissues come on. A hole once dilated in persons of that age never contracts. If all these persons had worn the best of trusses to the end of their lives their ruptures would have come down as readily on the last day as the first. Nature

does not assist them as it does children. Then they are mostly persons engaged in hard work; not children or schoolboys, but heavy men working as plasterers, painters, sailors, firemen, laborers, and so forth. To cure these men at their time of life and with their occupations is a much more formidable proceeding than any thing than Mr. Spanton has attempted. I have said that the cork-screw can only deal with inguinal ruptures; but unfortunately for the worst cases of these even it is ineffectual—I mean the cases where there is adherent, irreducible omentum sticking in the ring and keeping it open, or where there is an undescended testicle just outside the ring. These are the most serious of all cases of hernia because no truss is of service, and descent and strangulation of bowel are always imminent. I maintain that they can be cured alone by the operation that I am advocating, and by no other. You must remove this stumbling-block of omentum or testicle first, before any thing else at all will be of service.

With regard to the introduction of the radical cure as part of the ordinary operation for strangulated hernia, I think it will mark an important epoch in the history of that operation; and that in future the description, in place of commencing with directions to cut down upon and open the sac, will commence with directions to dissect the sac clear, so that it may be removed when its contents are restored to the abdominal cavity.

In instituting a comparison between Mr. Spanton's operation and the one under consideration, I should not for a moment desire to be considered as undervaluing the former. All I wish to show is that compared with what may be called the sac operation its capabilities are limited. Nevertheless I regard it as a most ingenious device; and I firmly believe Mr. Spanton in all that he says with regard to its success in the cases in which he had tried it. I have not performed it myself, because I have been so interested in the other that I have only looked out for those serious cases to which it is specially adapted. But I think that if a parent thought that his son would be the better of having his hernia radically cured while a boy, I would recommend Mr. Spanton's operation for the lad as the safest, and as probably equally effectual. Both operations have their sphere, and both will become popular in due time—for the simple reason that they are easy and can be done by any body. I trust we may both be successful in exciting in the minds of our fellow practitioners a desire to do something for the relief of a vast body of suffering men and women whose lives by reason of rupture are often rendered very miserable and useless, and not infrequently put in deadly peril.

The following are the chief conclusions at which I have arrived :

1. For simple inguinal hernia in boys where the sac and its contents are reducible Mr. Spanton's operation seems highly suitable.
2. The sac operation is applicable to hernia of all conditions, and specially to those reducible ruptures where there is adherent omentum in the sac.
3. As far as my thirty cases go it is shown not to be a dangerous operation, while its results from a curative or remedial point of view are most satisfactory.
4. Radical cure should form a necessary part of all operations for strangulated hernia.

In the discussion which followed, Mr. Spanton congratulated Mr. Banks on the success of his operations, which afforded an encouraging proof of the change of opinion which was now taking place with regard to the cure of hernia. It was quite refreshing to find a subject of this kind received with interest and kindness in such a meeting of the profession; the more especially as in all modern text-books on surgery all operations for the cure of hernia were alluded to only to be condemned as unnecessary or unjustifiable. Nevertheless, it was essential to keep quite distinct operations performed for cure of hernia in cases of reducible herniæ and those performed as an adjunct to imperative operations for relief of strangulation. Remembering that nearly one thousand and two hundred deaths occurred annually from strangulated hernia in this country, and that of these nearly three hundred took place after operation for its relief, it would be manifestly unfair to include any such cases among those which were classed as operations for the radical cure of hernia. Of his own operation, Mr. Spanton had notes now of about sixty cases in which it had been performed without any fatality, or indeed any serious condition to cause real anxiety. Such a satisfactory result had not been obtained from any other similar operation in this country. Mr. John Wood met with a fatal case in his twentieth operation; and in Mr. Banks's very interesting series of twenty-one cases (omitting those after operation for strangulation) the first death occurred in the fifteenth case. Mr. Spanton regarded the operation, as compared with others of expediency,

such as that for varicocele, osteotomy, and so on—after which numerous deaths were known to have taken place—as not only a safe and justifiable one, but one which would before long be considered obligatory on the part of the surgeon in the case of all young persons with reducible hernia. With regard to the mode of operation it would probably be found, as Mr. Banks had stated, that the best method would be that of ligature in some form or other for adults, and for cases of irreducible and strangulated herniæ; and his own screw method in those cases, especially congenital, occurring in the young. Among such patients the best results had hitherto been obtained, and no advantage had so far been found in the adoption of Listerian measures. Those instances did best in which adhesive inflammatory action occurred; suppuration had always an injurious influence upon the result. The operation with the screw was one which might safely be performed even on very young patients, and with the best possible results. He had performed a similar ligature operation to that so well described by Mr. Banks, in numerous instances of strangulated hernia, both inguinal and femoral; and his colleague, Mr. Folker, made it a rule to do it in all suitable cases of strangulated hernia in which an operation was required; and this year, out of six kelotomies, Mr. Spanton had ligatured the sac and abdominal rings in one hospital and three private patients, to effect a permanent cure with the best possible results. This operation was one which it would seem right to perform in every instance in which the condition of the patient at the time was sufficiently favorable to warrant it.

SYPHILIS TREATED BY HYPODERMIC MERCURY.—Dr. John V. Shoemaker describes, in the Transactions of American Medical Association, his mode of treating syphilis by hypodermic mercury, as follows:

I use for the injections a good glass syringe, provided with especially long needles, of the length of one half inch or so. I learned from the experience of others that the cause of abscess following hypodermic injections of corrosive sublimate was due either to the

use of a very short needle that would not penetrate sufficiently, or to the operator, who may have failed to push it far enough into the integument; and should the latter be the case, the fluid will be deposited in the stratum of the cuticle in which the absorbent vessels are wanting, and inflammation will undoubtedly supervene, causing abscesses. If, on the other hand, the operator has a long needle, and takes the precaution to drive it down to the cellular tissue, which is abundantly supplied with absorbent vessels, no injurious effect will follow. I have patients in private practice to own their own needle to prevent any possible contagion.

Dr. S. prefers gold needles, claiming that they are always in order, and in the long run the cheapest. The rust of the steel needles being hastened by the wire that is passed through them, I have remedied this by using bristles, and oil them previously to passing them.

For injection I use the following formula:

Corrosive sublimate,	1 part.
Distilled water,	100 parts.

I usually begin in weak patients with one-tenth-grain (10 minims) doses, and continue the same every day until the disease shows signs of abating or the patient experiences the constitutional effects of the drug. In stronger subjects I begin with the same dose, and gradually increase it minim by minim every second or third day until the same results have been obtained. After the patient has received a full mercurial impression in the manner above given, in case any of the syphiloderm should still be present, the doses are gradually diminished, just giving a sufficient quantity to keep the system under a gentle influence of the drug until all traces of the disease have disappeared.

In some cases (those of an especially obstinate character) I was compelled to push the drug until I obtained the constitutional effects, which were marked by headache, vertigo, hyperemia of the mouth, gums, and cheeks, increased flow of saliva, difficulty of mastication, disturbances of digestion, and diarrhea, before the syphiloderm would disappear.

In others, who were peculiarly susceptible of mercury, all the constitutional effects followed after several injections of one eighth grain, although I tried the peptones, chloride of ammonia, water and glycerine, together and separate, at various times, without avoiding the stomatitis, that Martineau reports did not occur in his hands with the above combinations. I was always compelled in these cases to begin with one or two minims of the solution, and gradually increase

the dose, minim by minim, until I reached the point where the patient showed slight evidences of intoxication from the drug; and then again decreased it. (See my paper in the Medical Bulletin, February, 1882, page 40.)

The infra-scapular and sacral regions are the least sensitive parts, and are also well supplied with a large quantity of subcutaneous cellular tissue, in which to inject the solution, and in my opinion are decidedly the best, as the pain of the injection is not so often or persistent as in other parts.

I drive the needle down deep into the cellular tissue, while I force out the contents; then slowly remove it and press and distribute the solution in the surrounding cellular tissue.

The skin surrounding the puncture becomes a little red and swollen in a short time, but these disappear at the most in a few days, though in some of the cases they remain for quite a time, forming hard spots, which eventually disappear, leaving no bad results. In giving two thousand one hundred and thirty-two injections I have had no inflammation or abscesses.

Many of the patients had had mercury previously by the mouth without decided results of any kind; others were totally unfit to receive the drug internally, being debilitated and broken down, or having weak digestive organs and an irritable state of the intestinal canal. The injections enable me to give tonic remedies by the mouth, together with a good, substantial, nourishing diet.

It is my belief that where hypodermic sublimate has failed, it has been entirely due to the carelessness of the operator.

My conclusions for use of hypodermic sublimate are:

1. The *accuracy* and *preciseness* of the dose.
2. By its use we *preserve* the healthful action of stomach and bowels.
3. That it may be used in almost all cases—in fact in all—without baneful results.

ACID PHOSPHATE IN INEBRIETY—In the Quarterly Journal of Inebriety Dr. Crothers, writing editorially, thus speaks of the acid phosphate:

The use of phosphoric acid in inebriety is very general, and the results are in most cases eminently satisfactory. It seems to act as a nerve tonic and sedative of peculiar power after the withdrawal of alcohol and during the first stage of convalescence. For many years I have used the ordinary preparation of dilute phosphoric

acid with some bitter tonic, generally an infusion of gentian or calumbo, getting excellent results within a limited period. But occasional uncertainty and limited duration of its action has been a source of annoyance that could not be explained. For instance, in one case after a few days' use an intense irritation of the stomach and indigestion would follow, the system apparently only tolerating small doses at intervals of days. In other cases this remedy was followed by rapid restoration and signal good results up to a certain unknown point, then revulsion would take place. After an interval of rest the same marked results would appear for an equally uncertain time. No change of formula ordered had any influence over the uncertain action in some cases. Within a year I have used the acid phosphate by Horsford, of Providence, a preparation composed of phosphoric acid, with the phosphates of lime, magnesia, and potash. In the experience so far, in the same cases in which the ordinary form of phosphoric acid was used, none of the unpleasant effects mentioned above have been noticed. The sedative effects seemed quite prominent, in many cases lessening nerve irritation and the general insomnia, which is so common in these cases. Two facts are clear from my experience, viz., that it is more positively a brain and nerve tonic for the disorders of inebriety, and that the system will tolerate its use longer with more permanent good results. In many cases of insomnia its action has been prompt and very marked, producing sleep equal to chloral or the bromides. This remedy should receive careful study by all who are treating inebriety; at present it gives promise of being almost a specific. Hence it should be tested clinically and its real value determined.

DR. BURKNER reports two cases where diphtheritis was propagated to the middle ear. The paracentesis was made with difficulty, on account of the excessive thickness of the tympanum. Pus and membranes were removed and hearing restored after some weeks' treatment. (Translated from the *Berlin Klin. Woch.* for the AMERICAN PRACTITIONER by Dr. Guido Bell.)

DR. FILEHNE has made some experiments with a new fever remedy, "Kairin" (Oxychinolin-methylhydrür, Fischer and Königs). It is made from peruvian bark, but by another chemical process than quinia. The muriate of kairin is crystalline, grayish, soluble in water and of a bad taste.

The maximum dose is one gram every two hours; its effect lasts three hours. A dose of 0.5 depresses the fever for two and a half hours; this dose repeated every two hours for three or four times brings the fever down to normal without any disturbance, but not lower than 37° or 36.5° c.

As long as the temperature is going down the patient sweats; when it has reached a stand-still the sweat ceases. The patient can be kept in that stage of euphoria for any time, or during the whole sickness. Healthy persons do n't sweat after taking even a large or repeated small doses. The sweat is the result of depressing the heat, not a direct effect. The urine is dark green, free from albumen and sugar. Dr. Filehne treated patients with pneumonia, none with malarial fever. He would recommend for that sickness one gram every hour for three hours before the expected attack, until six doses have been taken. (*Ibid.*)

PROF. BINZ reports forty-three new experiments with ozone as a soporific agent. Three persons in nineteen sessions reacted well; six persons in twenty-one sessions showed only depression; three persons did not react. They were students of medicine. They were comfortably sitting in a chair. Prof. Binz lays much stress on that. He believes that precedent excitement and an irritability of the throat cause a negative result. Ozone irritates the throat very differently. Prof. Binz speaks then on bromate of potass. and sod. as sedatives. He says even carbonic acid decomposes partly these chemicals and frees some of the bromine which influences the cell in the brain in the same way as the cell of the yeast, by diminishing or abolishing its work. Ozone in its physiological action stands near these halogenes—bromine, iodine, and chlorine. Prof. Binz says these facts do not add much to the understanding of artificial sleep, but show at least the direction to it. (*Ibid.*)

DR. LENHARTZ reports a case of pemphigus acutus gangrenosus and establishes it as an idiopathic disease. (*Ibid.*)

PROFS. BALMER and FRAENTZEL have examined the sputa of one hundred and thirty consumptives for bacilli, in regard to their development, their relation to fever and the course of the sickness. They made the following statement:

1. The prognosis can be made from the quantity of bacilli.
2. Their quantity increases toward the end correspondingly with increased destruction.
3. They are not always equally distributed, but sometimes in groups.
4. They are not always well developed, but sometimes poor, with only a few spores.
5. Such bacilli are found where the process came to a standstill, or in closed caverns.
6. In cases of fever or night-sweats spores are frequently developed.
7. All cases where many bacilli have been found were feverish.
8. More bacilli were found in the sputa than in the tissue of the lungs.
9. The increased development is not due to the oxygen. The same quantity was detected in the tuberculous pus in the closed knee-joint. (*Ibid.*)

DR. DEMME read a paper on the influence of the feed on milch-cows. The milk of cows exclusively fed on hay, and some fed on grass, and others fed on feed from the distillery, was experimented with on three series of twenty-five babies each. The second series did not show much disadvantage, but the third one had five children sick with fatal stomatitis. There was nothing specific in the diseases. (*Ibid.*)

PROF. CZERNY, claiming the priority of the extirpation of the uterus through the vagina, gives statistics of eighty-one cases with fifty-five recoveries, and refers to Billroth's remark: "A surgeon operating the first time after this method will be astonished at the simplicity and perfectness of the execution." (*Ibid.*)

DR. STRASSMAN reports two cases of spasm of the glottis. An anemic girl of sixteen years had a constant sound with inspiration like that of a toad, and palpitation of the heart, and was cured by metallo-therapy. Dr. S. is not inclined to call it hysteria. A boy of eight and a half years had with expiration a sound like that of a dying animal, changing afterward to that of a sheep, with some tickling in the throat and pains in the abdomen. It was a constant crying about every five minutes. During the night there was perfect rest. The galvanic current cured him completely, after the second session. Dr. Strassman refers to some other cases, and calls the disease neurosis of the vagus nerve. (*Ibid.*)

PROF. UFFELMAN has examined the milk of a young mother whose child could not digest her milk. It coagulated thickly, like cow's milk, and did not contain more lime than normal. All results were in the negative. (*Ibid.*)

DR. BIEDERT reports a case of senile hypertrophy of the prostate gland cured by electrolysis. He introduced a needle-electrode protected nearly to the point, and armed it as a cathode. (*Ibid.*)

Notes and Queries.

L'ENVOI.

Again the clumsy hand of Time and Toil and Care, it may be, takes up the pen to write Good-bye to Yesterday and bid Good-day to To-morrow. For sure as come the Postman and the Sun and Christmas and Thanksgiving and New Year, the melancholy joy of leave-taking and hand-shaking brings with its annual round of small by-gones and great expectations the one inevitable duty, the burial of the dead, the laying away forever of the loved and lost; not always of the earth or into it, but dead thoughts, dead hopes, even dying griefs, which while they lasted humanized us and kept us somehow closer in the tangled web of life, and in liver, tenderer, deeper sympathy with the stricken ones about us. Thus it is that "the future with the past is set at variance, and life begins to falter with the burden that it bears." Thus, too, to us all, soon or late, come the words of the song:

"The night hath a thousand eyes,
The day but one;
But the light of the whole world dies
At set of sun.

"And the mind hath a thousand eyes,
The heart but one;
Yet the light of a whole life dies
When love is done."

Alas! with each recurring year the Pen—knowing full well its time will surely come, and with length of days e'en grow older and older, and perhaps wearier and wearier—must indite the same sad story—

"Some who spoke then . . . are no longer here to speak or listen. Some who were young have topped their little hill and

descended into the valley of shades upon the other side. Others, like shocks of corn fully ripe, have been garnered. And ghosts draw nigh; and dim figures glimmer in the clouds; and the songs echo in the distance; and the rose-bushes have put on their nightgowns, and the roses are asleep."

This present number of the Practitioner begins the thirteenth year of its existence. In looking back over its career of twelve years it is impossible not to fall into a train of reflection which the Editor knows can be better honored in the breach than the observance; for he feels that at least in the conduct of this journal he has no reason to reproach himself. It was his purpose to give his profession, not a party or clique therein, an organ on whose integrity all might rely; and if he has at any time lowered the signals of this high aim he is unconscious of it. He looks back upon the route traversed with a certain pride in his work, and with the happiness of one who has been as guiltless of intentional wrong as of wanton offense; and despite the wear and tear of time, and the wrinkles sorrow has set in the lives of the good company who have jogged on so long together, his own aspirations are as pure and fresh as they were in the beginning; whereby he craves the continued indulgence and good will of his readers.

But enough of moralizing. A sad business at best. What right have we, weatherbeaten old friend, to throw our withered bones across the broad highway which, with hoops and jingles, spreads itself before our youngsters? Better take the words of the polite Greek who, while conducting the funeral of his infant child, apologized "for bringing out such a ridiculously small corpse to so large a crowd." What right have we, counting up our losses, to talk to them of sorrow? They will learn it soon enough, be sure; and so, though the air be a trifle more eager than we are, it behooves us to welcome its salutations and heed its suggestions. For while we will gladly swell the sweet iteration, "Peace on earth, good will to men," which came with the Christ, our own cry must still ring out, Forward! always forward! And just as it was "when this old hat was new," may it be now

if we do but will it so. The back-log glows as brightly. The water is as pure, and there is plenty of it, hot and cold. Sir, we greet you! Madame, your very humble servant! And—Doctor—give the embers a poke or two and joggle that phial of Tonic—

TO ALL OUR READERS.

THE MEDICAL ART IN SUMATRA.—The *datu* or doctor having either failed to cure, or having abandoned the case, an expedient sometimes resorted to is to consult the *begu* or evil spirit itself for advice. For this purpose all the sick person's family connections living in the town, men, women and children, assemble at the house. The room having been cleared for the occasion, is dimly illuminated by means of torches made by rolling up a leaf and pouring melted pitch into it. The spectators take their places in a circle around the room, while the actors in the drama are seated in the middle. On one side are the musicians, two, four, six, or eight young fellows, armed with drums of bamboo and deer-skin, and cymbals and gongs, bought from the Chinese, which are kept with the greatest care, in cases specially made for them, among the most precious heirlooms of the family. Of course no melody can be brought out from such instruments, but the musical effect produced by them consists in a variety of rythms, some of which are quite complicated and characteristic. Opposite the orchestra sit two men, one of whom is the *sibaro* or medium. Among the Battas, who are still heathen, each family or each town has two of these mediums, generally a man and woman. No one devotes himself to the office of medium of his own free will, and it requires the learning of no art; but, when the *sibaro* dies or goes away, the *begu* itself chooses a new one by taking possession of him; and, waiting this, the *obligato* music is kept up in the presence of the whole family till the desired event takes place. The *sibaro* is dressed in his ceremonial robes; from his head hangs a strip of cloth reaching to the floor, under which is a vessel of burning incense, the smoke of which rises to his head. After the music has

sounded for a short time, the body of the *sibaro* begins to tremble. He throws off the cloth and rises, and begins, with outstretched arm and a fixed look at the distance, slowly to turn to the rhythm of the music. At the same time a time-keeping convulsion, beginning in his fingers, extends from limb to limb, finally engaging the whole body, till at last the man dances in spasmodic leaps, which continue until he collapses in exhaustion. The music now ceases and the time has come for the head of the family to question the *begu* which has taken possession of the medium, first asking its name. The *begu*, having given its name, then asks why it has been called; and in response to this overture the whole occasion of the trouble is related, and the spirit's good advice is requested. The most important question is, whether there is any hope of the recovery of the patient, and what must be done to secure that desired result. If the family are not satisfied, as they are not likely to be with the unfavorable answer that is generally given, the music and the dancing are repeated, or the process is applied to the second *sibaro*. It sometimes happens that the two mediums do not agree in their revelations, and then the drumming and the dancing and the questioning are kept up until they are of accord. If the final answer is that there is no hope for the sick man, he is left to his fate, which has most probably been made more certain by his having had to endure the prolonged torture of witnessing these ceremonies; if a more favorable answer is given, all that the spirit requires as a condition of recovery is performed in good faith.

If the ceremonies are interrupted by the death of the patient during their performance, the music ceases and lamentations take its place; the company go away, leaving only the nearest relatives of the deceased at the house; a few shots are fired, either to drive away evil spirits, or to give notice of the death, and preparations are begun for the funeral.

THE DATU OR MEDICINE-MAN OF SUMATRA.—The Battas attribute all serious sickness to the work of evil spirits, *begu*.

A woman was attacked and brought low with fever. Her husband did not hesitate long, for she was a valuable help and had cost half his estate in purchase-fees, but sent immediately for the most famous *datu*, or medicine-man, in the region. A honorarium regulated by the value at which the wife was held was paid the doctor, and an equal sum was promised him in case of recovery. Incantations and external means were tried for a few days with no beneficial results, and then the doctor decided that he must make a *parsili*: this was a figure of the sick person, of about her size, cut out of the soft stem of a banana-tree, and clothed with a few rags. It is dedicated to the particular object it is designed to serve, with a certain set of magic forms, and is laid in the road outside of the town, with the expectation that the wicked spirit will come out of the sick person and go into it. As another means of making sure that this should happen, the sick woman was "stolen," or secretly taken in the night to another house. When all this proved to be of no avail the medicine-man declared that he had an extremely perverse spirit to deal with, and must use the most energetic means to drive it out. He pounded up a double handful of the terribly sharp red and green Spanish peppers, and sprinkled the juice into the mouth, nose, eyes, and ears of the poor sick woman, in order to bring the spirit to terms by means of the fearful pain the operation excited. When this did not help the medicine-man lost confidence, notwithstanding a hen was sacrificed in his honor every day, and would not stay any longer. He did not say so, however, but went off secretly; for he foresaw that he would inevitably suffer great shame and reproach if the patient should die on his hands. Of course—for that is understood there—he would have to go away empty-handed if the case proved fatal.

EDUCATION.—Dr. Pettigrew, Professor of Medicine and Anatomy in the University of St. Andrews, in a lecture introductory to his regular course, thus delivered himself on education. We commend his remarks to our readers:

The burning question of the day is education. We have our board and other schools, high and low; we have our colleges, technical and otherwise; we have our universities; and, within the last few years, even our Professor of Education. Education, from the earliest times, has been a subject of solicitude. Our views regarding it are, and ever have been, fluctuating. The ancients were not agreed upon it, neither are the moderns. The term education, as you are all aware, is from the Latin *educo*, to lead, or draw out, and represents the ancient idea of what intellectual training should be. The ancients believed, and I think rightly, that men varied as to intellectual capacity and endowment, and that it was the province of education to draw out of the man that which naturally inhered in him. The more modern (and I believe the less philosophic) view takes for granted that men vary little to begin with, and that every thing may be put into them by a process of cramming. The ancients aimed at teaching men to think and judge; the moderns have no soul above passing examinations and getting on in the world. As a physiologist, my sympathies are wholly with the ancients. I feel and believe that men vary infinitely, even from childhood. One has only to watch the progress of the innocent and helpless babe, as he progresses in consciousness and strength, to be convinced of this. The little cherub reveals, amid all his smiles, a certain something which is vaguely designated temper, but which in reality is disposition, or intellectual idiosyncrasy, or endowment. This deepens as he grows older, and it is in this sense that Wordsworth regards the child as "father of the man." The germ of certain things (mental as well as physical) exists in the child from the beginning, and urges him, *volens volens*, to do certain things, and to leave other things undone, or to do them in a very perfunctory or careless manner. The intellectual differences in the child altogether outweigh the physical differences; and hence it follows—and this is a matter of daily experience—that, of two children similarly placed as regards opportunities for learning, the one becomes ultimately a scholar, and it may be a philosopher, while the other barely attains a position of mediocrity. This shows that, while education can do a great deal for an individual, it can not do every thing. It explains how the immortals, Shakespeare and Burns, and a galaxy of great and distinguished men, towered like pyramids above their fellows with very little education, and, as it were, in spite of it. The vigor of some minds is such that they are superior to education; and their greatness wells out of them like springs of living water, irrigating and beautifying the barrenness of mankind as a whole.

These are the geniuses of our race. They spurn all mental direction and restraint and soar above the common herd as the huge lammergeyers soar in mid-heaven above the loftiest Alpine peaks. Some there are who deny the existence of genius, and accredit mere plodding with every thing that is lofty in design and execution. Such men are plodders themselves, and incapable of appreciating the situation. It requires genius to appreciate genius, in the same way that it requires diamond to cut diamond. The unanswerable reply to all such is, that the genius cuts out new paths for himself; he even creates the tools with which he works; he, in fact, indirectly supplies the materials and appliances which enable the plodders to proceed. The geniuses, unfortunately, are few in number as compared with the great mass of mankind; and it is for the latter that education is called upon more strictly to provide. That geniuses exist, and that they are, with few exceptions, the great leaders of the people is as certain as that the sun shines above our heads. This holds true from Moses downward. The movements of genius are often very erratic; but the grace and splendor of those movements delight and dazzle mankind. It is intellect which rules, and one of the great problems of the day (as it has been of all time) is how to develop and cultivate that intellect. How can we, in short, make the most of intellectual man? Is he to be educated by mere symbols and taught by rote like a parrot, exercising his tongue to the detriment of his head and heart? or is he to be confronted with nature in her vastness and her grandeur, and to be taught that he forms part of the mighty universe, and that his chief business on earth is to understand himself and the universe of which he is a part; and, more important than all, to realize in the universe and in himself the omnipresent Creator of both?

THE EMPTINESS OF FAME.—When Heine had been long an invalid and had endured much suffering, he exclaimed: "What does it avail me that at banquets my health is pledged in the choicest wines, drunk from golden goblets, if at the same time I, with all that makes life pleasant denied to me, may only wet my lips with an insipid, disagreeable, medicinal drink? What benefit is it to me that enthusiastic youths and maidens crown my marble bust with laurel-wreaths, if meanwhile the shriveled fingers of an aged hired nurse press a blister of Spanish flies to the back of my head? What does it avail me that all the roses

of Sharon tenderly glow and bloom for me? Alas! Sharon is two thousand miles away from the Rue d'Amsterdam, where I, in the dreary solitude of my sick-room, have nothing to smell, unless it be the perfume of warmed-over poultices."

A DESIRABLE CONTRIBUTOR.—The following note accompanies a valuable communication: "My Dear Dr. Yandell: Here I am, just as I am, only done in a great hurry. If you like me, bang my hair, and dress me in furbelows and flounces, and send me forth for comment and criticism. If you don't like me, bury me in your waste-basket for a short time and then cremate me." Such friends are almost as rare as the Dodo.

MEDICAL PRIGS.—Dr. Hughlings Jackson, in a recent address, says very truly that too much specialism in teaching tends to produce prigs rather than practitioners.

A POET SICK.—It is told of the poet Heine that he read medical works relating to his disease, and had acquired quite an extensive knowledge of medical subjects. He was accustomed to remark, ironically, "that his studies would not be of much avail to him, except that, perhaps, when he was translated to the celestial regions, he might deliver lectures on medicine, and explain to his audience how little earthly physicians know of spinal diseases."